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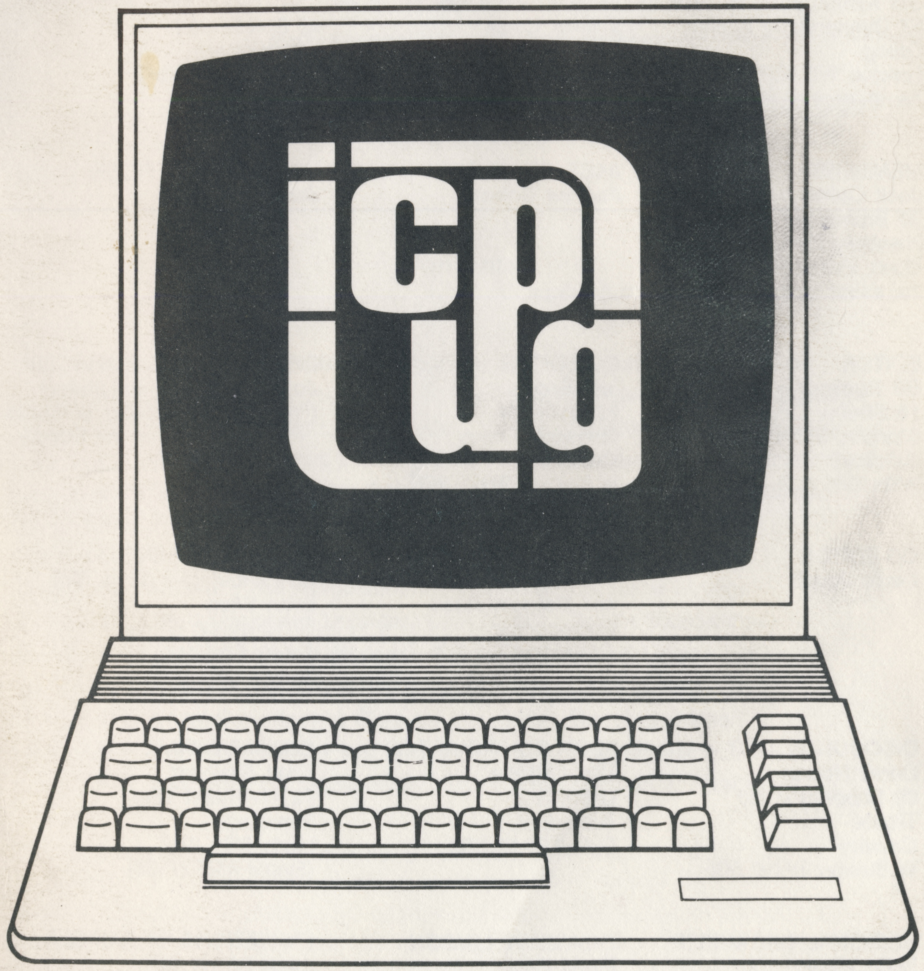

Europe's first independent magazine for CBM users

Volume 9 Sept/October 1987 Number 5

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icpug INDEPENDENT COMMODORE PRODUCTS USERS GROUP newsletter

Vol 9 No 5 September/October 1987

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EDITORS' NOTEBOOK

First of all I would like to apologise for the lack of Editors' addresses in the last Newsletter. The intention was to use our ever-accommodating Chairman as a 'buffer' to receive mail during the take-over. Unfortunately, in all the comotion of handing over the responsibilities and 'breaking in' the new equipment, this minor detail was overlooked, and no particulars were forthcoming on the inside front cover. Everything seems to be settled now, though, so please take note of the new addresses listing. I must thank Jim, John Bickerstaff and the ex-Editor Hugh de Glanville for accepting articles on my behalf and forwarding them to me without delay.

This is the first Newsletter by the new team, and I was pleasently surprised at how easy the changeover was. I was even able to keep to Jim Kennedy's 'timetable' detailed in the article 'Contributions' on page 489. The new 'look' and layout, by general consensus, seem to have been well received, so apart from correcting any spelling mistakes (though not all, I am sure) and touching up the odd article, my job was an easy one. The quality of this Newsletter should be slightly improved on the last as we are now using thicker, glossy paper for the camera-ready copy. According to our printer this aids in the pasting-up of the pages and stops the glue seeping through.

Paul Blair, our Australian correspondant, has come up with a real humdinger of an article, 10 pages of in-depth Superbase delving. I think Precision are starting to get worried that their customers know more about their products than they do. I must admit to having a modicum of personal pride in John Farnell's excellent article on Illegal opcodes (page 446) as I was somewhat instrumental in its conception. Mind you, he doesn't have a disk drive so I had to type the whole thing in (this is a once-off, I don't want anybody getting ideas), tables and all, but he's promised that now he's bought an Amiga I won't have to worry. It is these sort of 'pioneer' articles that I feel have raised the magazine to the heights it now enjoys.

Next time we will have a report on the Personal Computer World show, which I won't be attending, and a report from the Desktop Publishing show, which I will. We missed including something on the PCW by about a week, so I'm afraid you will have to wait for another two months. I also hope to re-starting up an old column with a friend, so don't go away now! Please have all contributions for the next issue to us as soon as possible, and please take note of the article on page 488. I'm off to the country now for a well-earned rest.

One last late item of news — infamous infiltrators and PCW writers Robert Schifreen and Steve Gold, a member of ICPUG, have been successfully defended by Alistair Kelman, another ICPUG member, in an appeal case involving 'The Great Prestel Hack'. Back in 1984 they managed to obtain access to the passwords of every subscriber to British Telecom's Prestel computer system, including Prince Phillip. Every network and bulletin devotee is well aware of this of course, but it seems that Prestel were intent on pressing charges, and the latest chapter in this story opens and closes with the case getting thrown out of court. There simply hasn't been any law passed in this country whereby an undesirable telephone trespasser can be prosecuted. Messrs Gold and Schifreen don't seem too perturbed by all the attention, though, as their article in Personal Computer World 'A Hacker's guide to data security' — how to protect your system from unauthorised entry --proves.

BB

⁂

BIBLE ON DISK

Pete MacLaurin, an ICPUG member who works for Precision Software Ltd, has the complete King James version of the Bible on one of his hard disk drives. He is planning to erase it in the not-too-distant future to make room for some other files. However, if any member would like a copy of these files before they disappear would they please contact the Chairman, Jim Kennedy (address inside front cover) before 1 November 87. With the request please state a little about yourself; the intended use(s) of the Bible files; your CBM equipment, including what disk drive(s) you have access to; and whether you would be prepared to make additional copies if others also request them. Based on the responses Jim will determine whether 1) a one off set will be made, 2) the disks should be added to one of the existing ICPUG libraries or 3) a separate library (possibly as part of an ICPUG Religious Regional/Postal Group) should be set up.

The copying of these files onto floppy disks is no trivial matter; they take up over thirty 1541 floppy disks and this fact must be borne in mind. Hence the request for information about members desiring these files; someone (a vicar maybe) may wish to organise religious matters or become the Bible disk copier. Having the Bible on floppies does open certain possibilities such as the swift and accurate incorporation of long biblical passages text into sermons, or the preparation of double-sized type on dot matrix printers of biblical passages for those with poor eyesight to name but two.

⁂

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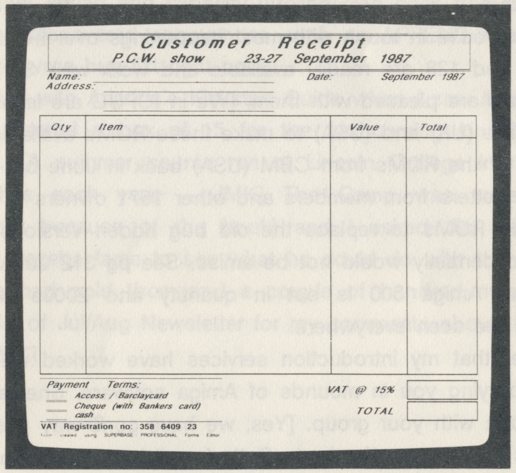

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JIM'S JOTTINGS

by Jim Kennedy

Jim Butterfield

I received a letter from Jim the other day with some interesting bits in it, so I'll reproduce it here and add a comment or two of my own where appropriate.

Dear Jim,

Gosh, now I have an ICPUG nametag as well as an ICPUG tie. I'm ready for anything!

Suspect you're in touch with most happenings over here. The new ROMs for 1571 and 128 are readily available and work well. Serious disk people tell me they are pleased with them. [We in ICPUG are leaning hard on both Commodore (UK) and (USA) to make these ROMs available here. I ordered two sets of the ROMs from CBM (USA) back in June but as yet have had no reply. Letters from members and other 1571 owners to CBM requesting these new ROMs to replace the old bug ridden versions might do some good and certainly would not be amiss. See pg 312 Jul/Aug Newsletter --- JMK] The Amiga 500 is out in quantity and 2000s (with bridge card available) are seen everywhere.

I gather that my introduction services have worked well and that Betty Clay is burying you in mounds of Amiga software. She is very pleased to be in touch with your group. [Yes, we have gone way past the 100 Amiga PD disks mark; many thanks to Betty for all her contributions. --- JMK]

During my visit over there I said at a couple of groups [Jim visited various ICPUG regional groups before the Commodore Show here last summer --- JMK] that I had my doubts about the RAM/DOS program that Commodore was supplying with the 1764 RAM Expansion module; mostly that it left code in the middle of the Basic area. Since then I've talked to Fred Bowen [Senior Systems Engineer at Commodore (USA) --- JMK] who wrote the thing and it looks like that part is OK; the memory area that worried me is swapped with the Expansion RAM as needed preserving all the important bits. It still crashes on me occasionally but the technical fears that I voiced back then are not valid ones.

Commodore are quietly working on a similar RAM/DOS program for the 128 but I have no data on release dates. The 'swap area' is trickier since messing with memory above address 16383 is painful but the version I played with seemed to be working. Commodore are also embarked on another project for possible commercial release. Don't groan, it's a 128 Development Package. No, really: the ones you recall from PET and 64 days had their ups and downs, and this is late for a 128 facility, BUT this may be different. The plan seems to be (if it materializes) to include a MOUND of source software with it, helping things like disk speed packs, RAM expansion procedures and many other goodies. Heck, I'd buy it just for the macros that seem likely to come in the package.

The 128D is in production (new ROMs, new video chip setup) and those who have played with it seem to like it. The 1581 [3.5 inch drive designed for the 128 --- Ed.] is also doing fairly well; I gather that new bugs are arising with this new product. Bulletin board operators seized upon the 1581 with its higher speed and capacity uttering glad cries (the operators, not the disk) and discovered annoyances such as APPEND not working quite right. Don't have a bug list right now.

I was so pleased with Ariadne's Kickstart Guide when I saw it in the UK that I promptly ordered a box of 15 for the forthcoming Lincoln Illinois Computer Camp. [A summer course run at Lincoln College in Illinois at which Jim teaches each year --- JMK] The Camp was subsequently cancelled (no, not because of the book) and I asked Jim Oldfield of Midnite Software Gazette fame to see what he could do with them. Within a few weeks he had sold them and a couple of hundred more. Good book. [see pg 315 of Jul/Aug Newsletter for my comments about this really useful book --- JMK]

Regards to all.

Jim

We all hope Jim will be over here next summer as usual for the Commodore Show. Regional Groups desiring to have Jim speak at one of their meetings prior to the show should contact Brian Wise (National Regional Organiser) and let him know of your interest. For this year's June show the ICPUG National Committee paid Jim's air fare along with his expenses during the show, with regional groups paying only for local ones while visiting their group. In most cases this involved meals and hotel for one night. It is not too early to start thinking about next year's show -- sorry, I don't yet know the proposed date -- and Jim's visit.

Colour Monitors

I set up colour monitors in all my word processing systems with white screens and black or dark blue characters whenever possible. Black screens, even on very good monochrome monitors, seem to hurt my eyes, and green characters

...make things even worse — if forced to use a monochrome monitor I prefer amber ones. At first I thought my preference towards white screens was largely due to our being accustomed to reading things on white paper. I now know this is not so, at least in my case. I wear bifocals which implies I do not have the ability to change my depth of focus easily (I also have astigmatism which makes vertical lines more blurred than horizontal ones.) Eyes are just like a camera lens with its iris diaphragm, so when I squint, closing the effective aperture of my eyes, acuity gets better and I can read lettering on things like signs much better (assuming I'm not wearing my glasses). And that is the reason why I like white screens: they give off more light and the pupils of my eyes close down allowing me to focus better on the text. Black screens open the pupils up, worsening the problem.

Someday all computers used for word processing will probably have paper white screens displaying 80 columns and 68 lines of text (ie display a full A4 or 8 1/2" by 11" size page). Meanwhile, the 1901 colour monitor I use with my 128D set to display a white screen is reasonably comfortable and much better than a black monochrome screen, at least for me. I tried setting a monochrome screen to green with black characters but that combination drives me 'round the bend'. It is almost painful to look at. Of course, others may have different preferences depending of eyesight or other factors.

Incidentally, some people complain that looking at green screen monitors all day causes them to see the world in funny colours (such as bright pink) for hours afterwards. I have been told, but cannot confirm, that Sweden does not allow people to use green screen monitors for that reason. Maybe one of our readers in Sweden could write and tell us more.

Standards In The Computer Industry

I wish we could be spared certain 'standards' in our industry or at least have them improved. Let me explain. I recently received a ticket for this year's IBM System User Show. It had JAMES KENNEDY LT COL on it and the covering letter was addressed Mr J Kennedy Lt Col. As those who know me will confirm, I'm not overly fussy about how people address me. If fact many people, with good and sufficient justification I'm sure, refer to me as that #*%@& so and so, sometimes even worse, and still remain friends. Maybe I should keep quiet as I got a ticket to the show and that's all that matters. But it does bother me that someone has done such poor programming.

As you know from past Newsletters I occasionally write software for Stringfellow's and the Hippodrome, those well known nightspots in London's West End. I would be ashamed to present them with a program which couldn't accommodate titles other than Mr, Mrs, Miss, and Ms. After all, there are tens of thousands of medical doctors and military men, not to mention numerous others with various titles such as members of the House of Lords and the clergy. (Admittedly not too many of the clergy visit Peter Stringfellow's nightclubs very often, but both the Princess of Wales and David Steel were at the Hippodrome the last time I was, and if they aren't bothered then a man of the cloth probably wouldn't be too upset, even if the girl accompanying David Steel did spill out of the top of her dress.) Anyway, addressing these people improperly is probably a sure way of losing their custom and making a competitor rich. So low marks to EMAP Exhibitions and the IBM System User Show. Their standards in this instance were very poor.

I should also mention that during the same week as the IBM System User Show BP (or rather N M Rothchilds who are doing the flogging) sent me, along with a few million other people, information about the BP share offer. Unlike EMAP, they got it right! The envelope was addressed Lt. Col. James Kennedy and the letter began 'Dear Colonel Kennedy'. The person that wrote that computer program knew what was what. If the financial people can get it right why can't the publishing types?

If this was the only thing which was poorly handled that week then you probably wouldn't be reading this drivel. However, the August issue of Practical Computing also crossed my desk at the same time as the show tickets. This magazine is almost entirely devoted to singing the praises of the industry standard computer, the IBM PC and its clones. And, every month, the magazine contains an 'agony aunt' column for computer users titled ASK PC which is written by John and Timothy Lee. About two thirds of all questions answered over the past few years by these two very knowledgeable chaps relate to problems with the industry standard word processor, Word Star.

True to form their column in the August issue devoted two of its three questions to WordStar and its problems. One question appeared which asked why, after the document was typed in and edited, couldn't the user indicate a change from one printer to another when the print menu was displayed on screen, asking for the printer type to be used. I thought that a reasonable request, any programmer worth his salt should have catered for it. Many businesses have fast dot matrix printers for drafts and daisywheel printers for the final copy. It turns out life isn't that simple with the industry standard word processor, WordStar. It took ASK PC one third of a page to explain how to enter hexadecimal code in a particular file loaded at the beginning, repeat beginning, of the session to change printers. Really, making a secretary put up with that sort of thing went out with Charles Dickens, didn't it?

Silly me: I also thought the second question in their column a quite reasonable one, 'How do I produce the symbol for British currency, the £

sign?' The answer was 'Sorry, with all versions of WordStar up to 3.3 you cannot. You have to upgrade to version 3.4 before you can print the pound sign.' Salesmen who sold this package to British businesses should be made to wear a sign around their necks saying 'CHARLATAN'. Having two smart programmers spend much of their time writing columns explaining how to use an 'industry standard' to do simple things like change printers or print the £ sign when other packages cope without problems is ludicrous.

Adding insult to injury, in the same August issue of Practical Computing there was a review of a combination word processing, dictionary and thesaurus program from the publishers of the New World Dictionary. And as you might guess from the publisher's name it is a North American based firm, but nowhere in the review did it state whether this package catered for British spellings. Would you, living in the UK, buy this package without knowing whether or not it would catch the spelling of the word color, indicate it as a mistake and possibly recommend you use colour instead?

Alas, I fear for the health of the English language as written and spoken in the British Isles. A friend of mine is a secretary in a large recording company which uses Microsoft Word. They don't use the dictionary that comes with that program. Now, in my humble opinion, Microsoft Word is much better than Word Star (no correspondence on the relative merits of these two packages please), but you get no marks for guessing that it also doesn't have British spellings.

Who are these salesmen who con people into buying things by saying 'Well, it is the industry standard you know'? Do they know anything about computers? Have they ever put finger to keyboard? Do they know how to use a dictionary? Do they know anything about the English language as it has evolved and been used in these islands for the past thousand or so years?

I'm not colonial bashing; for those who don't know, I'm one myself. If I were to return to the United States and buy a word processing package for a business located there I'd not purchase one with a dictionary that only had British spellings. Please explain to me why should I purchase one in England, Scotland or Wales with only American spellings? If a London car dealer offered only models with left hand drive for use within the British Isles would you buy one? And just how long do you think that dealer would remain in business? I don't understand why people put up with this nonsense in one industry and not the other?

Next time when someone says you ought to buy something because it is the industry standard be especially aware of what you are letting yourself in for. And, as for standards in the micro computer industry, well, some standards are good, others are just diabolical.

I Wish I'd Thought Of That

Both Hugh de Glanville, your last editor, and myself are somewhat jealous of Bill Bremner, the current one. Bill, in the last issue of this Newsletter, coined a new meaning for WYSIWYG. Bill's new meaning is, What You Send Is What You Get. This sums up the contents of this publication exactly. Hugh especially wishes he'd thought of it first [A bit early for bribery, surely — somewhat blushing Ed].

It's very true. No good complaining there isn't enough material on the PET, C64, C128 or Amiga in the Newsletter. We don't pay any of our authors for their efforts. Neither, as Hugh and Henry were fond of saying, do we charge them for the privilege of writing for this journal. Consequently, we rely on contributions from all of you out there. You don't have to have a degree in Computer Science to write for the Newsletter, just a desire to share some of your computing experience with others like yourself.

Some examples of articles which we could publish might be a survey of the computing scene in other countries. Such an article might include things like what computers and software are available and what local circumstances do to the computer scene. For instance, certain characters in some languages may be available only on the keyboards of one or two machines or accessible from within only one program and this may lead to these packages being very popular. We hear that certain countries have a very big software piracy problem. How this affects things like that country's home developed software industry vis-a-vis its hardware industry would be very interesting.

I receive post from places as far away as the Fiji Islands (one member there ordered one of our ICPUG ties) and Uruguay. Even short articles about computing in countries such as these would be most welcome by all our readers. Closer to the United Kingdom are members in countries such as Iceland, Denmark, Italy and Holland, to name but a few, and we would welcome articles from them and their experiences.

We also would be interested in having someone write a series of personality profiles for the Newsletter. It would help if this person lived in the Southeast as the greater portion of 'ICPUG personalities' reside there. Contact the editors if you are interested or can recommend someone.

The ICPUG Software Library

I received the new set of C64 library disks the other day from Andrew Hartley, the C64 Librarian, and I was very pleasantly surprised by their contents. Many improvements are evident. Things like VDOS and its turbo loader are present on the disks I browsed through along with two word processing programs on the business side. Any one who has a C64 and printer should at least know how to use a simple word processor. Computers are to the world of business what trains and lorries are to the world of manufacturing; for anyone not to know what a WP does is like not knowing what an aeroplane does. Along this same vein and with the price of a package like Mini Office II being under £20 with additional discounts to members, there is no excuse for a computer user not to also be familiar with spreadsheets and simple databases.

At the risk of overburdening our library copiers I would suggest members who haven't done so in the last year or so consider obtaining a copy of the library directory appropriate to their machine(s). They contain numerous useful programs and even a few interesting games which provide a pleasant break from more serious computing tasks.

Amiga Printer Error Messages

With my Amiga running Analyze! and printing out a fairly large spreadsheet to my Juki 6100 printer which had extra RAM chips installed to create a larger buffer, an error message requester came up stating there was printer trouble whenever the printer buffer was full. Apparently the Amiga waited too long while the buffer was emptying and decided that printer developed trouble. Clicking on either Cancel or Continue box in the requester made the Amiga continue sending more data till the buffer filled up again and the error message repeated itself. This was irritating.

Tom Cranstoun solved the problem. His suggestion was to set the Juki 6100' to IBM Host Computer Data Mode (ie. dip Switch No 3 in the Juki 6100 to ON). Others using printers with Diablo 630 protocols may find Tom's suggestion useful if the error messages appear within their applications.

These are some of the irritating little things the manuals never seem to tell you. Actually the Juki 6100 manual does contain three different methods of fixing the 'Time-out' problem with IBM computers but they are all buried in the chapter on how to make the IBM PC 'behave' with Word Star. Most users of other equipment or software would never bother reading the IBM chapter or Word Star bits. It is mildly interesting that when compared to either IBM or Word Star most other computers and software packages seem to need much less space in manuals telling you how to make them work properly. But maybe it's just my imagination.

Power Cleaners Revisited

Tony Firshman Services makes Computer Cleaners; these are mains-borne power filters which I reviewed in the Nov/Dec 85 Newsletter. Tony upgraded the specs on these computer cleaners and now has three models; a 1-way adapter for £14, a 3-way adapter for £18 and a 4-way trailing socket for £24.

We should all thank him for donating two more of his 3-way adapters to ICPUG for raffle prizes at the PCW show as he has done in the past. You may order direct and quote him your ICPUG membership number to get a 5% discount. Tony is at 12 Bouvier Place, London W2 1RB and his new telephone number is 01-724 9053.

I have been using two of his 'cleaners' for over two years now and have had no more problems which I could attribute to 'dirty' power supplies. These filters really do seem to work if you have certain types of mains power problems. Surprisingly, a momentary flickering of the lights caused by a voltage drop doesn't bother most computers very much. However, spikes or radio frequency interference caused by switching heavy appliances can make life miserable for others.

I have not tested other makes of mains filters on the market, some of which are very pricey indeed, so cannot comment of their effectiveness. If you suspect 'dirty' mains-borne power problems I'd recommend trying one of Tony's filters as they are cheaper than most others on the market. Also certain machines seem to be susceptible to these problems than others; the C64 seems somewhat vulnerable and if anything else was switched on in the same house a QL was apparently almost unusable without a mains filter. It was because of these QL problems that Tony developed his filters which are now used by thousands of others with all sorts of other computers.

Compunet After The Resurrection

Logging on to and moving around Compunet since it moved offices and changed computers has become very much faster than before. Some sample times to access a page are as follows:

Compunet - 6 - 15 secs per page
Prestel - 4 to 7 secs per page

These times were based on a quick run through a few pages on both networks one afternoon and evening. But I did notice that during one other session recently graphics pages on Compunet seemed generally slower than text ones and occasionally took up to 20 secs.

These speeds are a great improvement over the old Compunet. It will, of course, always be a slightly slower system than Prestel due to error checking protocols which are very useful if you live in an area where telephone lines are noisy and lots of extra characters get added to non-error checked pages. For instance, my telephone lines usually become very bad particularly after a heavy rain when I sometimes have to refresh my Prestel pages two or three times to fully read them. On Compunet one only observes the symbols in the lower right of the screen when the telephone line is noisy and the system is doing its re-send bit.

Some of the demos and utilities on Compunet are very good. I looked at the one Brian Grainger recommended (pg 386 Jul/Aug 87 Newsletter) called Circlesque at 216087, it is very good. The new Amiga bouncing ball demo is also very nice.

WARNING

Prestel Microcomputing is carrying a news item saying that Modem House have gone bust. Modem House was the subject of many Advertising Standards Authority complaints over the past few years and its practices were the subject of debates both on Prestel and various magazines. One complaint the ASA received was that they advertised one of their modems as being Compunet compatible. When first contacted by me as an interested 'naive' buyer they replied that they had a chip which would access Compunet and that they would provide a program to anyone who purchased one of their modems to do the same. When the ASA later got on to them they changed their story to 'Sorry, we've changed all that but unfortunately the camera-ready copy has already been sent to the printers'.

If members have sent money to Modem House and not received their goods then their only recourse is to contact the receivers. However, I wouldn't hold out much hope for any joy.

We at ICPUG have many contacts with many reputable dealers throughout the industry as well as knowledge of a few whom we receive many complaints about. Members are always welcome to ring our discounts officer who will advise them of the best known price for an item whether it be through us or direct to a dealer. We make no profit out of discount sales (in fact it costs us for telephone calls, postage, etc. but that's what the subs are for) and are therefore able to give impartial advice. And we also try to warn members when we know of a firm that appears to have an abundance of complaints or other problems. Of course, we cannot guarantee any advice we give but our track record is pretty good. I myself don't buy anything without first talking to John Bickerstaff, our Discounts Officer.

1571 VERSION 4 ROM UPDATE

A couple of members have responded to my previous Jottings article requesting information as to whether any version 4 ROMs for the 1571 disk drives were about. Both Mr C Shaw of Sheffield and Mr W Cartwight of Chertsey state they have Version 4 ROMs in their 128D machines. It would appear that Commodore did, in fact, supply version 4 ROMs with some 128D machines in the UK.

SUPER* CORNER

edited by Jim Kennedy

Inserting fields in Superbase 64

From Jonathan Barber comes some suggestions about inserting fields into existing Superbase record formats. Bear in mind that simply adding a new field in the middle of an existing format will result in all the contents of the fields from the new one onward shifting upwards and messing things up in royal fashion. There are various methods of doing this, two of which are:

1. Put an extra field at the end of the format, rename fields as necessary, and shuffle the data into the right fields using 'batch'. This is tedious if you have a database which is large either in terms of number of records or of fields to be shifted.
2. Use the database to database transfer procedure. This can take a long time however.

There is, however, another method which Jonathan has used with success with Superbase 64 version 2.03. With a file of names, addresses and other data we wanted to insert a [telephone] field after [postcode] and before [type] which was the first of the remaining data fields.

First, a backup of the disk was made in case of accidents, and then the following was entered:

```
batch all [postcode] = [postcode] + chr$(96)
```

This writes an an additional field separator character into the [postcode] field of each record in the file, so that Superbase will read back an extra (blank) field between [postcode] and [type] in each record. The final stage is to format the file definition again, this time with the [telephone] field in its right place. It is important to do this immediately after the previous stage to prevent loss or corruption of data.

New Superbase Version

There is a new version of Superbase 128 on the way. It will be known as version 3 and will allow export to a another disk drive. This will help with large databases where there is insufficient room on the original drive for the database and the export file. Price for upgrades are not known at this time.

SUPERBASE : DIRECT DATA READING

by Paul Blair (Australia)

Being habitually curious, I have long pondered just how SUPERBASE (SB) works, and whether it is possible to access data without going into SB itself. Yes, we know how to EXPORT and DETAIL stuff from SB, but sometimes that may not be what we want to do. Besides, there is the challenge of it all.

What follows is a program with some explanations drawn from my delving into a database created with SB V2.07 on a C128 with a 1571 disk drive. The techniques used can be altered to work on a C64/1541 combination, but there is a speed sacrifice - the machine code insert would have to be replaced by more conventional disk reading commands, and the Basic 7 routines changed to Basic 2. (Please see the note at end of article for C64 and PET version information.)

To set the scene, a very brief introduction or recap on the structure of SB. The term database is used to encapsulate and control up to 15 files, each file having its own indices and data. Files can be cross-linked, allowing broad flexibility for data manipulation.

We can represent the structure quite simply with a diagram:

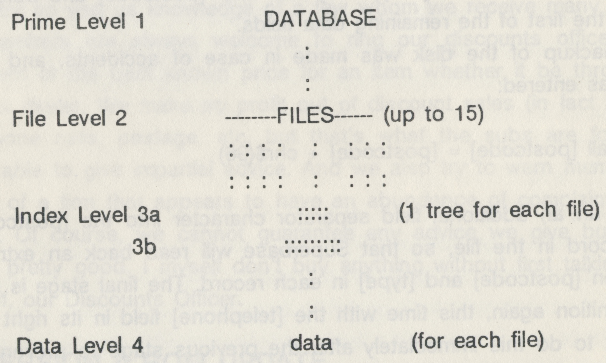

Figure 1

To read SB data directly, we have to follow this structure to get to the good bits. The overall SB plan takes the shape of a tree, speading downwards from the database (Level 1) through the files (Level 2) to the indices (Level 3) and eventually the data at Level 4. Level 3 is actually another tree, a binary tree in fact, if you are a student of data structures. In this article, I will ignore the second tree, because the idea is to show you how to read a file end to end. The main use of the second tree is for inserting, finding and deleting items, and I don't plan to cover that topic this time.

Starting up

So let's set up some parameters, and get cracking. I'll explain as we go along. In the programs listing, I have shown Commodore control characters in square brackets; [DN] represents CRSR DOWN, [WHT] means CONTROL WHITE and so on.

```
100 rem: poking around inside Superbase v2.0x storage
110 rem: Paul Blair Canberra Australia
120 rem: as at 26 Apr 87 / phase 2 / c128   80 col / 1571
130 rem: disk reference: 221-254 21
140 :
150 bank15:fast:poke251,0:poke252,13:sy=2816:sz=sy+768:ck=sy
160 za$=[17SPACE]:za$=za$+za$+za$+za$+za$:za$=za$+za$+za$
170 a=fre(1):mm$=JANFEBMARAPRMAYJUNJULAUGSEPOCTNOVDEC
180 color5,4:color6,1:printchr$(14):z$=chr$(0)
190 print[CLS]SUPERBASE READER[WHT] . . V 1.6 at 26 Apr 87 //Paul Blair
```

The program will use 1571 burst mode to read nearly all information from disk. We will use a small machine code routine to put the actual data into a string (ZA$), from where we can print it, or mess around with it if we like!

```
200 reada:ifa=-1then210:else poke ck,a:ck=ck+1:cs=cs+a:goto200
210 ifcs<>20140thenprint[DN] Error in DATA statements...recheck:end
220 :
```

With the SB disk secured in the 1571 drive, we have to supply some information to get things rolling. The database name (in upper case), and the particular file are required, of course. Then we shall be asked whether we want to read the file forwards or backwards. Forwards means that index sectors will be read sequentially from first to last, showing the data indexed from each sector. Backwards can be either the exact reverse of Forwards (i.e., all key fields in reverse order), or in reverse index order. I'll explain later, and show you an example to clarify the difference.

```
230 print[DN]Insert the [CYN]SUPERBASE[WHT] data disk .. press a key
    when ready:getkeya$
240 input[DN]Which database  (upper case):;db$
250 input[DN]Which file to read          :;fc$
260 input[DN]Forwards / Backwards   [F/B]:;ww$
270 xm=instr(fb,ww$):ifxm=0 orxm>2thenprint[2UP];:goto260
280 ifxm=1then300:elseinput[DN]Sequential/Index order [S/I]:;wo$
290 xn=instr(si,wo$):ifxn=0 orxn>2then print[2UP];:goto280
    :elseifxn=1thenxm=3
```

Some disk action, at last. The database file is opened (our Level 1), and (if you will refer to Figure 1) we can find our file name (Level 2) in Lines 330 and 340, and the information to take us to Level 3, the index level.

```
300 open7,8,7,fc$+,s,r:ifdsthen710
310 fora=1to35:get#7,g$:next:lr=asc(g$):close7:dime$(lr)
320 open7,8,7,db$+,s,r:ifdsthen710:elsefora=1to14:get#7,g$:next
330 nm$=:fora=1to10:get#7,g$:ifg$=theng$=z$
340 nm$=nm$+g$:next:ifnm$=[10SPACE]thenprint[DN]File not
    found:close7:end
350 get#7,a$,b$,c$,d$,r$,s$:ifleft$(nm$,len(fc$))<>fc$goto330
```

The sample sector in Figure 1 contains a whole lot of useful items. I've translated some bytes to characters to show more clearly what it contains. The sector is arranged in 16 modules, each 16 bytes. The first module (the first line) is not much use in this example, so Line 310 above simply skips over it.

```
TRACK tt  SECTOR ss
HEX  00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
-----------------------------------------------------
00:  19 05 11 00 01 02 0B 08 00 00 08 00 00 08 0C 00
10:  M  E  M  B  E  R  S  00 00 00 0E 04 02 0C 3E 02  (file 1)
20:  E  X  P  E  N  S  E  S  8  7  .. .. .. .. .. ..  (file 2)
30:  .. .. .. ..                                      (etc...)
```

Figure 1 at LEVEL 2

Each of the next 15 modules contains one file name from your database (you recall the SB limit of 15 files?). The first 10 bytes on each line are the assigned filename, padded with 00 bytes if the filename is less than 10 characters. The next 4 bytes are pointers, and the last 2 are the number of data records in the file. Lines 330-350 capture this.

Bytes $1A and $1B (whose values are $0E and $04) are indirect pointers to the index sector for the last record in the file (Tr 14 Sec 4 in this example). Bytes $1C and $1D ($02 and $0C) point to the first index sector for the file (Tr 2 Sec 12). The last 2 bytes ($1E and $1F) are in reverse order (the CBM way, low byte then high byte), so there are (2x256)+62 records in this file, which is 574. In program lines 360 and 370, TL, SL, TN and SN take on the corresponding track and sector values, while NR holds the number of records.

```
360 tn=asc(c$+z$):sn=asc(d$+z$):tl=asc(a$+z$):sl=asc(b$+z$)
370 nr=256*asc(s$)+asc(r$):close7:ifdsthen710:elseonxmgoto390,600,730
380 :
```

Reading forwards

Assume you have chosen F for Forwards: let's follow along to see what happens. Having opened the error channel (15) and logged in the disk (U0L) can start reading the index sectors (Level 3) for pointers into the fourth level, where the data itself is kept.

SB uses a simple format for each index sector, although the first index sector is slightly different from the rest. Essentially, the main index sectors (Level 3b) contain the key fields of the records, plus pointers to the sectors where the matching data is stored. The number of key fields stored in each index sector depends on their length. If they are short, there will be more than if they are long. Makes sense.

```
390 print[CLS][CYN]Reading SUPERBASE file [WHT]<fc$>[LTRED]
    FORWARDS [CYN] lrfields/recnrrecords[WHT]
400 window0,2,79,24,1:open15,8,15,u0l:ifdsthen710
410 rem: -- read the key index blocks --
420 x=x+1:ct=14:tv=tn:sv=sn:poke252,14:fg=1:gosub560:poke252,13:fg=0
    :ifx>1thenct=10
430 fx=0:tn=peek(sz+6):sn=peek(sz+7):eb=peek(sz+10)
```

Now, the record pointers. The GOSUB560 in Line 420 burst loads the first index sector into computer memory at $0D00, whence we can simply PEEK at the index records. Figure 2 shows the first part of a standard index sector, again with some translations.

Bytes $06 and $07 (Line 430) are the chain bytes TN and SN to the next index sector. We will continually sample these bytes to get our forward links, until they both read zero (00 and 00), which means we have reached the end of the index sectors. Bytes $02 and $03 are also of interest, as we shall see later.

Byte $0A holds the number (EB in Line 430) of the last byte used in the current sector. Then, at either Byte $0F (first index sector) or Byte $0B (all others), the first key field starts. Key fields are terminated by a character with the high bit set (I have put a * to mark the place), which means it has an ASCII value greater than 128. Line 450 checks for this. Looking at Figure 2, we have a character at Byte $11 (N*) with the high bit set. The two bytes following N tell us that the ADAMSON data is stored at Track 3 Sector 4.

```
         TRACK 2   SECTOR 12
         00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
         -----------------------------------------------
     00: 02 0B 02 07 00 09 02 0F 00 09 38 A  D  A  M  S
     10: O  N* 03 04 00 B  R  O  W  N* 03 06 00 .. .. ..
     20: .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..
     30: W  I  L  S  O  N* 03 09 00 .....anything
     40:
```

Figure 2 at LEVEL 3

```
440 print[LTRED][DN][RVSON] INDEX SECTOR FORWARDS [RVSOFF]x
     >> Current Tr/Sectv;sv  Next Tr/Sectn;sn
450 ct=ct+1:rr=peek(sz+ct):ifrr>128thenfx=1:cu=cu+1
460 print[RVSON][CYN]chr$(rr and127or32);
470 rem: -- if fx then read main data block--
480 iffxthenprint[WHT];:dy=sz+ct:tv=peek(dy+1):sv=peek(dy+2):j=peek(dy+3)
     :ct=ct+3:print[RVSON] Tr/Sectv;sv:gosub560:fx=0
490 ifct<ebgoto450
500 ifbwthenreturn:elseiftn<>0goto420
510 :
```

Just to be safe CT counts the bytes to make sure we don't shoot off past the end byte (EB), because as index sectors are updated, they can leave junk on that sector that we don't want to know about. Line 460 prints each key field onto the screen to show how things are going.

A Superbase fact now comes into play. There is a rule in Dr Hunt's book about SB, which roughly translates to this. SB allows 1 record to each sector for total record lengths over 123 bytes, or 2 records per sector if under 124 bytes per record. This is very critical, because the difference is 2 - twice (or half) as many records can fit onto one disk, depending on the magic number 123. Remember this when you are designing your next SB database.

Back to Figure 2. SB is cunning. After the track/sector information TN and SN directly following the last character in the key field, there is a flag (named J in Line 480) to indicate where data is held within the data sector. If there are 2 records per sector, then SB figures out which record to read by using the flag byte. The first record starts at Byte 10 (flag byte=0), the second at Byte 133 (flag byte=1). So we get a considerable speed gain from that one byte by being able to go straight to the data.

Line 570 then goes off to read the data block into memory at $0C00. Part of the machine code then swaps the data into a string in Bank 1, set up earlier as ZA$. From there, you can do all sorts of things . . .

```
520 print:printIndex sectorsx:printTotal recordscu
530 print#15,u::close15:print[2HOME];:end
540 :
550 rem: -- read main data block--
560 ck=10:ifjthenck=133
570 pokesy+125,tv:pokesy+126,sv:pokesy+128,tv:sys sy:iffg=1thenreturn
580 sys sy+129,,,ck:a=peek(250):zb$=left$(za$,a):printzb$:poke252,13:return
590 :
```

Reading backwards

Backwards is nearly the same technique as Forwards, except that we have to fiddle around a bit to get to the last index sector. Lines 630-640 do this for us, and then we can start into reading off some data.

In the case of Backwards, we read the values of our chain bytes to the previous sector at Bytes $02 and $03 in Line 660. Check this on Figure 2. From there on, we follow almost the same routine as Forwards. Again, two zero chain bytes tell us we have backed up to the first index sector, and can quit.

As promised earlier, a word or two about Backwards. Suppose you have two index sectors containing pointers to AA, BB, CC, DD and EE on the first, and QQ, RR, SS and TT on the second. One way of reading them back to you is in order QQ RR SS TT AA BB CC DD and EE, which is simply stepping backwards through the order of the index sectors, but forwards through each individual sector. This is what I termed reverse key index order above, and is chosen by I from the opening screen.

If you want true Backwards last to first, (TT SS RR QQ EE and so on), then choose S instead of I. Reading then takes true reverse order.

First, the I routine.

```
600 print[CLS][CYN]Reading SUPERBASE file [WHT]<fc$>[LTGRN]
    BACKWARDS [CYN] lrfields/recnrrecords
610 window0,2,79,24,1:open15,8,15,u0l:ifdsthen710
620 rem: -- find the last key index block --
630 ct=10:tv=tl:sv=sl:poke252,14:fg=1:gosub560:poke252,13:cb=peek(sz+9)
640 ifcb<>9theneb=peek(sz+10):tl=peek(sz+eb-2):sl=peek(sz+eb-1):goto630
650 rem: -- found block --
660 tp=peek(sz+2):sp=peek(sz+3):eb=peek(sz+10):iftp=0andsp=0thenct=14
670 x=x+1:bw=1:print[LTGRN][DN][RVSON] INDEX SECTOR BACKWARDS
    [RVSOFF]x >> Current Tr/Sectv;sv  Next Tr/Sectp;sp
680 fx=0:fg=0:gosub450:iftpthentl=tp:sl=sp:goto630:elsegoto520
690 :
```

A touch of utility. It got left here when I decided to write the S routine, and didn't get moved to a tidier place.

```
700 rem: -- oops --
710 print[CLS][3RT][4DN]DISK ERROR ds$:dclear:end
720 :
```

Now the S routine.

```
730 print[CLS][CYN]Reading SUPERBASE file [WHT]<fc$>[YEL]
    BACKWARDS SEQ'L [CYN]lrfields/recnrrecords[WHT]
740 window0,2,79,24,1:open15,8,15,u0l:ifdsthen710
750 rem: -- find the last key index block --
760 ct=10:tv=tl:sv=sl:poke252,14:fg=1:gosub560:poke252,13:cb=peek(sz+9)
770 ifcb<>9theneb=peek(sz+10):tl=peek(sz+eb-2):sl=peek(sz+eb-1):goto760
780 v=10:tp=peek(sz+2):sp=peek(sz+3):eb=peek(sz+10):iftp=0andsp=0thenv=14
790 :
800 x=x+1:bw=1:print[YEL][DN][RVSON] INDEX SECTOR BACKWARDS
    [RVSOFF]x >> Current Tr/Sectv;sv  Next Tr/Sectp;sp
810 lb=eb-3:pt=eb-4
```

```
820 ifpeek(sz+pt)<128andpt>vthenpt=pt-1:goto820
830 ifpt=vthenpt=pt-3:pu=1
840 eb=pt+3:fora=eb+1tolb:print[RVSON][CYN]chr$(peek(sz+a)and127or32);
    :next:cu=cu+1
850 tv=peek(sz+lb+1):sv=peek(sz+lb+2):j=peek(sz+lb+3)
860 print[RVSON][WHT] Tr/Sectv;sv:fg=0:gosub560
870 ifpu=1andtp=0then520
880 ifpu=1thenpu=0:tl=tp:sl=sp:goto760:elsegoto810
890 :
```

Calendar routines

The calendar routines can be left out, if you like. I use them to convert the SB storage system (days since 1900) back to readable form (23JUN40) for selected fields. The variable TY (Line 930) sets which fields in each record are date fields, so you will have to figure this out for your own application.

All you do to hook in these routines is change PRINT ZB$ in Line 580 to GOSUB910.

```
900 rem: -- to print date fields in std form --
910 ty=0:w$=chr$(96):zb$=zb$+w$
920 h=instr(zb$,w$)+1:e$(ty)=mid$(zb$,1,h-2)
930 ifty=19orty=10thenip=val(e$(ty)):ifip>0thengosub980:printip$ ;:goto950
940 printe$(ty) ;
950 ty=ty+1:zb$=mid$(zb$,h):iflen(zb$)<1thenprint:return:elsegoto920
960 :
970 rem: -- a calendar routine to convert [date] to ddmmmyy since 1900 --
980 yy=int(ip/365.25)
990 dd=ip-365*yy-int((3+yy)/4):ifdd<=0thenyy=yy-1:goto990
1000 formm=1to12:w0=dd-28-val(mid$(303232332323,mm,1))
1010 if(3andyy)=0andmm=2thenw0=w0-1
1020 ifw0>0thendd=w0:next
1030 ip$=right$(str$(dd),2)+mid$(mm$,3*mm-2,3)+right$(str$(yy),2):return
1040 :
```

You might find the burst routine useful for something you are doing. The C=128/1571 burst read commands give such speed that it is reasonably easy to grab whole sectors into computer memory and work on them there, even if only for a few bytes. The GET# command is very slow by comparison.

Here is the machine code that adds some respectable speed to the process.

```
1050 rem: -- m/c routines --
1060 data 169,  0,141,124, 11, 32, 12, 11, 32, 55, 11, 96
1070 data 169,  0,133,250,173, 28, 10, 41,191,141, 28, 10
1080 data 162, 15, 32,201,255,162,  0,160,  7,189,122, 11
1090 data  32,210,255,232,136,208,246, 32,204,255, 44, 28
1100 data  10, 80,  1, 96, 76,120, 11,120, 44, 13,220,173
1110 data   0,221, 73, 16,141,  0,221,169,  8, 44, 13,220
1120 data 240,251,173,  0,221, 73, 16,141,  0,221,173, 12
1130 data 220,133,250, 41, 15,201,  2,176, 27,160,  0,169
1140 data   8, 44, 13,220,240,251,173,  0,221, 73, 16,141
1150 data   0,221,173, 12,220,145,251,200,208,233, 24, 36
1160 data  56, 96, 85, 48,  0,  0,  0,  1,  0,132,254,169
1170 data 255,133,252,169,253,133,253,169,252,141,185,  2
1180 data 169,  0,133,250,164,254,185,  0, 13,240, 13,162
1190 data   1,164,250, 32,119,255,230,250,230,254,208,236
1200 data  96, -1
```

What's the point of all this, apart from providing me with endless hours of fun(?) figuring it all out? I wondered if you'd ask!

One point, of course, was for all of us to learn a bit more about SB, and to take a few moments to appreciate some of the intelligent methods used in a professionally written database program. I've only shown a few here, but believe me, SB abounds with clever things.

The real purpose was more selfish on my part. From time to time SB will throw a tantrum, and a perfectly fine database becomes a nightmare. Thank goodness this is rare, and good housekeeping will make it rarer still. But if you have ever contemplated the task of typing in a whole new batch of records (I know of those who have ...), you will have viewed the darkest moment of your computing career.

I don't like dark moments, and early on in my SB career I found that the problem usually came from one bad index sector (Level 3) or a bad data sector (Level 4). No more, no less. I also learned (having an idea of where things were on disk) that I could patch around bad sectors. By patching, plus some adjustment to the number of records the file thinks it has, I had 98% recovery in no time at all. Some EXPORT, re-CREATE-ion, and I was laughing.

But if my neighbour walked in with a blown disk, I had no way of working out what to patch to where — hence this program. Using it, I can sneak up on the bad index sector from both sides, then arrange a connection between good sectors to span over the dud ones. Sounds simple, but it took some figuring, let me hasten to add.

The program will not grow much (unless someone out there has better methods, I'm always willing to learn), because I see it as an exploratory tool. The actual patching will probably be done best using a track and sector utility. There are just too many variants to cope with; and besides, you can always learn while trying this sort of thing for yourself.

There is a lot that could be written about the very efficient binary tree structure used by SB for internal management - what I have termed Level 3a. I personally feel that these notes are probably about as far as anyone needs to go (besides, any more might reduce your time actually using SB), but I would be open to suggestions.

One caveat: if there is only one (1) index sector in the file (either the keys are very short, or the file is somewhat empty), the program will get lost. It is possible to check for this condition, but I didn't regard it as an essential addition.

Last, but certainly not least, my thanks to Precision Software, especially Peter MacLaurin who has given me every courtesy and help. If anyone wants to contact me, my address is 35 Calder Crescent, Holder, ACT 2611 Australia.

Note (added later):

Since speaking to Jim Kennedy on the telephone, I have been asked locally to prepare a C64 and even a PET version of the program. I did, and copies have been sent to Jim on disk. I have touched up the C128 version a little , but the changes don't really alter the above notes.

C128 — the main changes are traps for null characters in the early stages, mainly when calculating the number of records in a file. Next, the GET routines, together with tests for ASCII > 128 to detect the end of key fields have been replaced with a small m/c routine. This was in the pursuit of speed, but I may have overdone it — it now whizzes up the screen too fast for my eyes. Must be old age. The other bits are identification only — with other versions around, I altered the opening screen. That's all.

The C64 version is slower, but not too slow. I kept to simple m/c routines for disk reading, altho' I did a fast version with bi-bit transfers (not included here). The trouble is that 1541 and 1570/1571 models vary to some degree, making universal timing difficult. As well, the USA/Canada needs a special fast routine because of their different clock speeds, and it all got too complicated for me. So it's vanilla, but works quite well.

The PET version is so standard it hurts. But it goes well, and the guy who wanted it is quite happy. That's the test, I guess. (C) Paul Blair 1987

[Note: Anyone wanting a copy of one of the programs should send a disk, reusable packaging, and return postage to Jim Kennedy, stating clearly which is wanted.]

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CUSTOMISING A SUPERSCRIPT DEFAULTS FILE

by Robert Erskine

Superscript is unusual as a wordprocessor package in that it offers users the opportunity to programme the keyboard letters into macros which facilitate fast and fluent use. This article describes a particular customisation of macros into the defaults file which render the package more 'user-friendly' and offer the user access to some sophisticated applications with the minimum of fuss.

I have pleasure in presenting with this article a one page specification of the function of the Run/Stop codes in the defaults file (fig 1), and a print out of the actual coding (fig 2). The file has emerged simply from two year's actual experience in the writing and editing of research reports and much admin work. I use Superscript in unison with Superbase on a Commodore 64 computer for mail merge applications and reports for business and pleasure.

Flexible text

A college lecturer may wish to distribute handouts with economical print at 1800 words per sheet, double sided, and in condensed mode. From the same text he may wish to create an overhead slide, double spaced, bold, enhanced, and with as few as 100 words per slide. However, next year this material may need some revision. It would be nice to access last year's notes from a computer document, modify them and then with very simple keystrokes re-present the data in the variety of formats again. This feature goes some way to making the blackboard obsolete!

A textbook writer needs much flexibility in producing a text in terms of margin layouts and print types. For proof reading he may be tempted to print in condensed mode to reduce bulk and save paper. However, the publisher may want letter quality format, probably in 10 CPI mode, complete with generous margin settings in manuscript format for the convenience of the editor. A book may involve as many as 300 separate linked files, and it is a formidable job manually changing print specifications from such a population of documents.

The obvious solution is to omit the margin specifications from the text and instead place such specs in default files. Then the basic text can be printed from its original data in whatever final form the author should decide. While editing the original text he may wish to preview on screen several different styles and margins, hence the need for offering such differences, which are easy to access in the defaults file. Eg: (Run/Stop J) starts condensed mode, (Run/Stop I) restores 10 CPI, each with relative margin settings.

Cursor movement

The majority of time spent in document preparation can usually be attributed to editing. Many features in the defaults file are aimed at getting rapid recovery from editing problems. For instance, you may decide that certain words need to begin with capital letters. How convenient it would be to position the cursor anywhere on a word, then immediately change that letter into a capital, then cursor to the next word should repeating the function be required for several words of a heading (Run/Stop q). Also in most editing operations there is a requirement to change wording, reformat the paragraph, and go to the end of the paragraph. It is most useful to achieve this whole operation in one keystroke (Run/Stop .). Thus the defaults file can reflect an author's style of work.

Centering and underlining

These are constantly used features which enable an author to give emphasis and reveal structure in his work. The entry of these codes is tedious without a good defaults file definition. (Run/Stop C) is an example of such useful combinations.

Proof reading on screen

The prime qualities in text are grammar, spelling, and layout. Scrolling can be very difficult to control and irritating for an author. (Run/Stop v) offers a special view template from which the text is given a 40-column, double-spaced format and a page length the same as the screen size. This effectively provdes Superscript with a simulation of the ergonomic principle of 'WYSIWYG' (What You See Is What You Get), without loosing the advantages of working in clear text from a 40 column screen. Most of the IBM compatible Wordprocessor packages use an 80 column edit screen and operate the WYSIWYG principle, but a high resolution monitor is then essential, whereas Superscript requires only a monitor, which can double in the home as a domestic television.

A stab at publishing formats

The editor of a newsletter likes to get text into columns, and one solution to this requirement is to acquire a full desktop publishing system. With both hardware and software this might set you back £18,000. However, there is a much simpler solution in the defaults file (Run/Stop G) which offers a far cheaper answer to many of the requirements of column printing. It gives a template which enables the user to print with offsets whose sizes are set to simulate.columns. Then all the user has to do is print the odd pages of a document first, remount the paper, and print the overlaying even pages, and

Bob's your uncle: you have a two column page. If you want three columns, (as offered in figure 1 of this article), then the paper will need re-positioning twice and the offset for page 3 incremented by the column width.

There are some other interesting applications of this column printing technique - that of printing telephone numbers on a sheet of A4 paper. How many is it realistic to get? With two columns of 55 each printed on both sides, then reduced in a photocopier by half we get 440 names, all readable. A nice mini contact list to carry about in one's wallet.

Simplification of operating system functions

The loading, filing, inserting, and scratching of documents are such fundamantal and frequently used features that the simplification or reduction of keystroking is welcome.

Arithmetic

The calculator facility of Superscript is powerful but rather cumbersome to access. A common need of many people is to insert a column of numbers and then calculate a total. (Run/Stop !) sets this up by clearing a margin for numeric use only and fetching the figures so they can then be entered merely by hitting a tab key. Other operators are also supplied in the Run/Stop menu, without some simplification the features of the calculator are likely to be ignored by the majority of users.

Blocks, labels, envelopes, and indentation

Much editing of text involves the marking and movement or style changes to blocks of data, and the command sequences of Superscript which achieve this are difficult to remember, so are simplified by inclusion in the defaults file, e.g. (Run/Stop B).

Labels creation is a 'black hole' for the novice, and fraught with traps. However, (Run/Stop P), generates a working template with a solution to this problem of print specification, and is readily adaptable to different application and print environments. Most users find it conceptually impossible to think in terms of just a 9 line page length, which simulates the label.

However, the virtual page size idea coming from label processing is a most useful concept when printing from data base files. These have a nasty habit after being exported to exceed the 500 line memory capacity of Superscript. However, this restriction no longer applies when the user forces the exported database into labels with just a one line page size! Using this technique the author has printed a Xmas card list of 1000 names without any memory problem. (Run/Stop K) and (Run/Stop k) generate the remainder of the mail

Fig 1. Defaults file specification

(Hit Run/Stop key then another)

0 (conditional page change to prevent headings being left at bottom of page unintentionally)
1 (search and find)
2 (delete character to right)
3 (link document code)
4 (place current document on disc)
5 (begin enhanced print size)
6 (finish enhanced print size)
7 (generate footing code)
8 (delete current character)
9 (letter interchange)
a (load document from cursor)
A (remove merger markers and reset for mail merge applications)
B (mark block and erase)
b (generate bottom margin paramater)
c (begin centering text)
C (centre text framework with underlining)
d (finish centering text)
D (date in format month year)
e (erase line)
E (envelope framework. Inserted at end of letter. Normally mark address block first then cursor is at point to do CNTRL-A and you get the envelope ready for printing. The envelope is the last page of print)
f (change case word)
F (yours sincerely etc. for letter ending)
G (template for double column printing with 12 CPI mode)
g (define block)
h (change case of block)
i (insert doc from cursor)
I (end condense mode, restore right margin to 73)
J (Begin condense mode with right margin setting 137)
j (move stored block)
K (for generating mm code)
k (for variable mm block name)
l (move cursor to left of screen)
L (House letterhead)
m (margin release with np check)

^ (margin release but no np check)
n (view from page number)
N (name document)
o (print spec in 80 column paper, displays parameters)
p (force new page)
P (parameters for label generation)
q (change case first letter of word-recovery from common error)
r (restore margin without indentation)
s (scratch document)
S (generate spacing code for printing - commonly used in editing)
t (indent text)
T (initialise tabs and set centronics interface.)
U (begin underlining)
u (end underlining)
V (file block as new doc)
v (view spec - generates a line of parameters to facilitate proof reading. Page through document just hitting V. Very useful)
w (cursor to beginning current word)
x (remove current word or word to left).
y (cursor to end of paragraph)
Z (cursor to line 7 to begin copy of address)
z (cursor to tab position on return symbol - Useful for initiating new paragraphs into existing documents, yet retaining efficient cursor movement)
+ (next screen - close to right-hand finger to get unison in paging in editing)
- (previous screen in edit mode)
! (for entering table of figures on tab key entry for addition)
= (reformat and go to end of para - commonly used in making original text)
@ (paragraph return with end of page check. Makes for better layout of pages)
£ (start bold)
* (end bold)
; (cursor end of current word)
: (underline start and end codes together - for conveneience)
) (right margin 92 - change to 12 CPI with revised margin)
' (clear counter then add)
((10 CPI - right margin 73 - restores normal print mode after using 12 CPI or condensed)
& (multiply arithmetic register by...)
% (put arithmetic result at cursor)
< (reformat text and go to end paragraph - common editing requirement during insertion of new paragraph in old document)

^ (margin release but no np check)
n (view from page number)
N (name document)
o (print spec in 80 column paper, displays parameters)
p (force new page)
P (parameters for label generation)
q (change case first letter of word-recovery from common error)
r (restore margin without indentation)
s (scratch document)
S (generate spacing code for printing - commonly used in editing)
t (indent text)
T (initialise tabs and set centronics interface.)
U (begin underlining)
u (end underlining)
V (file block as new doc)
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w (cursor to beginning current word)
x (remove current word or word to left).
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= (reformat and go to end of para - commonly used in making original text)
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: (underline start and end codes together - for conveneience)
) (right margin 92 - change to 12 CPI with revised margin)
' (clear counter then add)
((10 CPI - right margin 73 - restores normal print mode after using 12 CPI or condensed)
& (multply arithmetic register by...)
% (put arithmetic result at cursor)
< (reformat text and go to end paragraph - common editing requirement during insertion of new paragraph in old document)

Fig 2. Defaults file coding

```
*lm7:rm73:ci10:tm0:bm1
 0:li6:sp0:pl70:of0:eo0:
 cn:jy
*0=*^lnp7
*1=/ssf
*2=^u^u/ec
*3=*lk:
*4=/dr
*5=/fes
*6=/fee
*7=^n*ft8:
*8=^u/ec
*9=/ab^u^m^u/am
*a=/dl
*A=/dme/dmr/gs
*B=/eb
*b=^n*bm4
*c=*cy;
*C=^n^n^n*np7:cy;^m^m
 :cn^m^y^y^y/el^y^y^&:
*d=*cn^m
*D=May 1987.^w^e
*e=/el
*E=*lm1:rm80:sp1:of0:
 eo0:bm0^m^m*ln8^m*
 ^j^j^h^h^h^h*^m*ln9^m
 ^&>
*f=^f^e
*F=*cy;Yours
 Sincerely, Name
*cn^m*np^m
*G=*lm1:rm40:of3:eo52:
 ci12
```

```
*g=/ab
*h=/ac
*I=^n/fce^m^n*lm7:rm73
 ^m*i=/di**J=^n/fcs^m^n*
 lm9:rm133^m
*j=/am
*K=*nm:
*k=/dmv
*l=/gl
*L=*cy;HouseName,
 ^mTown,^mCounty,
 Post Code^m^&<
*m=*np2^m/lr
*N=/dn
*n=/pfv
*o=^n*lm7:rm73:ju1:sp0
 :tm0:bm10:of0:eo0:pl70
 ^m
*P=^n*lm28:rm59:jn:sp0
 :bm0:pl9^m
*p=*np^m
*q=^w^e^f^f^e
*r=*in0^n^m
*s=/due
*S=^n*sp1
*t=^n*in4*np
*T=/gl/tc/ts^u^u^u^u/ts
 /gl/pic
*U=/fus
*u=/fue
*V=/db
*v=^n*lm1:rm40:sp1:
 bm0:of5:eo5:pl20^m
```

```
*w=^w^e^
*x=^c^d^s
*y=^p^y^y
*Z=/gn7^m
*z=^s^s^s^s^&y
*+=/gd
*-=/gu
*==^z^p
*@=*np4^m
*£=/fbs
**=/fbe
*;=^e^h
*:=/fus/fue^h
*)=*ci12:lm7:rm92^m
*(=*ci10:lm7:rm73^m
*'=/cz/ca
*&=/cm
*%=/cr
*!=/tc/tn^i
*^=/lr
*.=^z^&y
*<=Telephone
 number^m^&?
*>=*cy;^m*cn^m*np:lm7
 :rm73:bm10:sp0^m^y^y
 ^y^y^y^n^m
*?=^m^m*cn^m^y^y^y/
 el^y^y^&D
```

Note ^I symbols can be coded as CNTRL-I, (represented as symbol * in this document), and these take up one character, not 2! However, it becomes too easy to fill the available space reserved for run stop coding and all economies in coding are welcome.

When you add some mail-merge formats to certain groups of addresses you can build a base to support regular letters to all members of the family from a single mailshot. With a little extra design within the family mail merge templates and the letters can also be significantly personalised to suit each family member in each mailshot.

Conclusion

The defaults file for me has been a key building block in the setting up of what is now an elaborate and well developed information system. The features it offers for customisation make it transform a good package, Superscript, into one of excellence, which would be very difficult to beat in the market place. However, specification of a defaults file does not come easily, and there is possibly an argument in favour of offering potential users, in the first instance, a well thought out and developed one. From such strong base they are much more likely to draw out the full potential of the sophisticated features of Superscript without some of the hassels of a long learning cycle. Many modern packages have 'help' facilities to guide the learner. I would suggest that a good defaults file is indeed a most significant 'help' feature.

Gaining fluency in using a modern wordprocessor with a powerful package can be a great pleasure in its own right, and this should be attainable for most adults provided the package is sufficiently user friendly.

Whoever would have thought that Superscript, with some intelligence customised in the defaults file, had the potential to render envelopes and blackboards to a state of potential obsolescence and even make some inroads into the specialist field of desktop publishing?

⁂

WHAT'S IN A NAME?

Have you noticed how many Brians provide information for ICPUG? Myself, Brian Fowler, Brian Foster, Brian Wise.... . There must be something peculiar about us Brians (no rude comments please). A similar quirk appears on the ICPUG committee. If you look at the committee list (Vol.9 No.4 P.308) out of 34 different names more than a third have christian names beginning with 'J'. This must be out of proportion. They hold all the top posts as well! I wonder if anybody has done a study into whether your position in life is determined when you are christened!

Brian Grainger

⁂

PERILS OF PORTIA, AGNUS & DAPHNE - 4

by Brian Grainger

This time the article is a little shorter, not because I havn't been doing anything on the Amiga, but because I have concentrated my efforts somewhat when not involved with disk copying.

Two points carried over from last time: the latest catalogue from MISCO now quotes the Tilt'n'Turn at two different prices --- one at £60 and the other £36! I would pay the latter if I was interested. Secondly, Steve Bell mailboxed me to confirm my suspicions that Amiga Flight Simulator ran on some 1.2 Workbench machines and not on others. He found it worked OK on his friend's A2000 but not on his A1000 with Workbench 1.2. He has also tried Scenery Disk 7 on four different A1000s with varying results. The disk refuses to load on one and is temperamental on the others. Does this mean that there are differences between the A1000 and A500/A2000 we have not been told about, and/or is the A1000 disk drive prone to misalignment with use? It may be my imagination, but I think my drive is noisier now than when it was new.

The big event, for me at least, this last period occurred at 20.21 on 7th August 1987: I had a version of COMAL running on the Amiga. It was the latest MSDOS version 2.10 operating under Transformer. This was a result of some happy coincidences. My major problem had been tranferring MSDOS COMAL from 5-1/4" to 3-1/2" disks. At work I have been investigating a similar problem in transferring word processor files from a CPT dedicated machine to Displaywrite on a PC. Suddenly we had on loan a machine from CPT which had MSDOS capability, a hard disk, 5-1/4" disk and 3-1/2" disk drive built in. Having completed my investigations on the word processor I quickly transferred COMAL to the 3-1/2" disks. That same night I took it home and loaded it into the Amiga. It loaded perfectly. I was reasonably impressed with its compatibility with Transformer, although the graphics commands wouldn't work, which I expected. However, I loaded a calendar printing program that worked once I had removed the third parameter of the INPUT AT statements (the one that defines the maximum length of input). One irritating aspect of Transformer I did not mention last time was that it does not appear to recognise my printer (MPS1000). I know there is an updated version of Transformer around, so if anybody knows where I can get hold it please let me know. As well as running COMAL I tried some PC shareware called DISKLOOK. This seemed to work without any problems and was quite fast. The next stage will be to try COMAL on an A2000 with bridgeboard.

When playing around in MSDOS I thought I might have come up against a fundamental incompatibility between the A1000 and the A500. Those who have seen an A500 will know that the keyboard layout is slightly different. Furthermore the functions, HOME, PgUp, NumL etc. are available on the IBM's numeric keypad. I found it possible to get these functions on the A1000's numeric keys by pressing them as normal. However I was not able to access NumL, ScrL, PrtSc which are located on the A500's arithmetic operator keys. The A1000 doen't have these keys. Has anyone got any ideas? Despite this I still like the A1000 and consider the seperate keyboard very useful. In applications where it is rarely needed, such as RubyView or Deluxe Paint, I can rest the keyboard between processor box and a lower placed table (hanging vertically). I then have the full table space available for the mouse but still have access to the keyboard. This is not possible with the fixed-keyboard A500.

We have taken delivery at work of an A2000 with Bridgeboard and hard disk. I was a little concerned to discover that both these facilities do not function properly at present, and replacements are being sought. Apparently the problems with the hard disk have been experienced by others as well. There have been rumours, denied by Commodore, that a Workbench 1.3 is being worked on, ostensibly to make operations with the hard disk faster and more efficient (I was impressed with what I saw anyway). I wonder if there is more to this rumour than meets the eye [or ear - Ed.] and that the upgrade might also solve the problems being experienced?

The second major task I have been attempting on my Amiga is to draw some diagrams using Deluxe Paint II. Mike Todd touched on this subject last issue in Amiga Watch. I have found his problems of printing diagrams repeated to some extent on my MPS1000. However, I do not think it can always be as bad and I do find that it is useful to try printing sideways. This may resolve the problem of missing lines. One thing I found strange is Mike's request for some bigger fonts. I have the opposite problem --- in a diagram the text is too big and makes the result very 'busy'. I want some micro fonts. I have been playing around with the micro font from ICPUGLIB-GRAPHICS-2 disk but it has peculiar definitions for some letters, 'N' in particular. If anyone knows of a source of tiny fonts, let me know! Alternatively an article on how to amend a font file would be appreciated.

Finally, those on Prestel will note that I have edited a page recently. I am now using RubyView with a Prism Modem 2000 which I find quite adequate to edit with, including on-line editing. Micronet are currently doing a deal on this package plus a years free subscription for about £120. If only the Editor would accept articles written on an Amiga --- ! wouldn't have to use my 64 at all! [If only I had an Amiga... - lonely Ed.]

REVIEW --- ANALYZE V2

by Pete Miles

Jim Kennedy and myself were talking recently, over a whisky or 4, about the various programs becoming more readily available for the Amiga. As I already had Superbase and Analyze V1 and they had been reviewed at another time I thought it might be of interest to offer a review of Analyze V2. So here goes.

The spreadsheet Analyze V2 has been available in the UK for about 4 months and as I already had V1, but thought it somewhat limiting, I sent for V2 direct to MicroSystems Software in Florida USA. The fact that it took 4 weeks to get here and that it appeared to have been held up by British customs for 2-3 weeks is neither here nor there, but be warned if you send to the US direct. Apart from anything else I was rather miffed at having to cough up £9 extra for VAT etc. [I've personally found that most American companies are quite happy to state on the green Customs receipt that the package is a gift or sample of merchandise of '0' value if asked - Ed.]

The new Analyze comes complete with a rather natty dark silver-grey covered ring binder manual. This is larger and more complete than the first manual issued with V1. Still, it should be better with two bites at the problem. The introduction and preface deal at some length on how to backup the master disk to your own disk. This is primarily because Analyze comes on Workbench 1.1 but as most people will know by now Workbench 1.2 is now fairly, nearly, more-or-less readily available (albeit with bugs). A free utility program is provided in the worksheet drawer supplied on the disk to enable you to copy all relevant files onto your W-b 1.2 disk. The whole of this procedure is very well documented and should not prove any trouble to implement. The introduction goes onto describe copying functions for 1 or 2 drives and again is nice and clear.

Having prepared your new Analyze disk you obviously want to load it. Do a warm start CONTROL-AMIGA-AMIGA and on the Workbench requester load your new disk. The Analyze icon appears in the top right hand corner and takes the shape of a 3 1/2 disk, and upon clicking on the icon the metal slider that protects the disk slides over out of the way! You may ask, 'So what?', but it gets better. The new Workbench appears and the first thing you notice is the huge magnifying glass Analyze icon, a sundial clock, and a trashcan that really does look like a good old fashioned metal bin. Click on the bin icon and up goes the lid ... neat. The worksheet, system and empty draws all slide open on clicking on the icon. It's not really that important but it goes to show that a bit of DESIGN flair in the visual presentation department can add a modicum of fun in what is primarily a straightforward business program.

The manual is split into five major areas, namely: beginners tutorial, advanced tutorial, graphs, the macro commands and the usual built in functions. There is obviously no way each area can be discussed in detail so a brief outline will have to suffice.

Beginners Tutorial

The Beginners Tutorial dicusses all the basic parameters needed to set up and operate a spreadsheet. However, the chapter starts by telling you what a spreadsheet is and then how to change the memory requirements. The default spreadsheet size is 16K and this value, together with other system defaults, is available on selecting 'status' from the Workbench menu. Microsystems evidently think that this is quite big enough for normal purposes. It is very simple to change this size using the mouse and usual Amiga style drop down windows. The maximum size I could obtain on my 512K rig was 55k. I should think that this size is a function of the RAM availability as Analyze can sus out how much RAM it has to play with. Entry of data is of course from the keyboard but cell manipulation is either by mouse, the quickest, or by the keys. In fact, all the usual things you would expect to find in a top quality spreadsheet. What is definitely not usual is its ability to access Lotus 123 files. Looking at the Worksheet menu shows 'Archive Analyze' and 'Archive 123' Quite a large appendix resides at the back of the manual telling all about the Amiga and Lotus although Microsystems shyly refer to 123 as a 'popular'IBM spreadsheet'. This is surely very useful to those people with access to IBM compatibles at work who prefer to live in Commodore land at home.

Advanced Tutorial

The Advanced Tutorial goes that bit further and discusses in greater detail some of the topics from previous chapters. Included here is formatting and re-organising your worksheets and moving and copying formulas together with relationships between relative and absolute addresses. Microsystems have littered their manual with plenty of actual screen photos and it is these screens that go with the worked examples that you key in. Each stage of the keying in process is very well explained and I could not see any glaring omissions as to what to do or how to do it. Printing is dealt with at some length. Analyze can produce fully documented reports with titles, headers, footers and so on. In fact just about any style of presentation you care to choose. Printers supported will be any that exist in preferences. It might be opportune to make the observation that various members have written in saying that their printer doesn't do this or that and that they have had to go to considerable efforts to achieve some aspects of printing. Microsystems do not mention any printers per se in the manual, so it might be worthwhile checking to see that your own printer does what you want before you rush out and buy this program. I understand that a program is now available from Microsystems that allows worksheets to be printed sideways. This seems to be a common utility with both 8 and 16-bit computers. However, it is always worth finding out (if you don't already know) if your printer will print in condensed mode, say 15 characters per inch or 132 columns wide. This may well give you all the width you need for your spreadsheet without the expense of an extra program.

Graphs

Graphs are usually high on peoples' lists of desirable utilities and Analyze certainly comes up trumps with no less than 8 graph options available, from the usual bar and pie charts to line, x-y, area, stack bar, z-pie and 3d bar graphs. These graphs are dealt with in the same clear manner as the earlier tutorials but like many manuals this one starts to drop off slightly when the going gets tougher.

Memory requirements are something you should be aware of as after loading Analyze into a 512K machine there is approximately 180K of memory left. After taking about 80K for requesters and resizing windows etc your Amiga will, after consideration, leave you about 100K for your spreadsheet and graphs. Now a normal 4 colour graph will use roughly 35K but a full blown technicolour graph uses 50K. So, if you use 2 4-colour graphs you have somewhere around 30K left for your worksheet. Running a few tests shows that a default worksheet size of 16K allows for 3 medium size 4-colour graphs and about 2 medium to full size graphs. If for example you need to display several graphs at a time you should operate from the CLI without loading Workbench. If you only need to display 1 graph then about 100K is available from the CLI. All this heavy maths goes to show that for any of these big and powerful spreadsheets extra RAM to the tune of at least 1/2 a meg is required. Talking of expansion, Analyze has been tested with Alegra's 512K RAM card, Comspecs' 2-meg RAM card, and so on. Therefore there should be no trouble in using any of the currently available expansion cards.

Graphs are made up of a series of numbers called element data ranges. Every number within the data range is called an element and each data range makes up an element of the graph. Once a graph is displayed, legends, group, and element labels are used to enhance the appearance of what is shown and make the graph more comprehensible. Analyze allows up to 6 data ranges to be defined and each data range can consist of as many cells as you desire. However, with the Pie and z(3d)-pie graphs a maximum of 10-15 elements is recommended otherwise the graph will become cluttered and unreadable. The graph menu is stuffed full of options and it is possible to build yourself quite a dazzling display of graphery with Analyze. It seems from what I can see and what I have discovered so far that the graphs are limited by a) your ability to spend time studying the options and b) your imagination. As an example of your own, not supplied on the Analyze disk, try the following: set up a worksheet based on Jim Kennedy's benchmark timing test for Visastar (last month's mag). Then select the graph menu and choose 'MODEL PIE'; 'GRAPH 1'; 'COLOUR 4'. This will produce an extremely dense graph with values round the periphery, but as these are so close they blend in to form a white border. The final result is not to dissimilar to the Moire-effect programs found on Amicus disks. All this does is show that Analyze will attempt to resolve even the most dense amount of data.

Macros

I said earlier that as the going gets tougher the more the manuals fall down and where is this more evident (at least to me) than the Macro language chapter? When talking to MicroSystems in the USA their technical support told me that there is quite a steep learning curve with macros but they are very powerful and useful ... ain't dat de troof. As well as individual macros you can create your own duck shoot type menus. Some of the commands available allow IF.. ..THEN, WAIT, BRANCH and so on. Nesting of subroutines can by all accounts be several layers deep. This facility gives the possibility of tremendous control over your worksheets. Sort is another area not included in Version 1 of Analyze and is intended to enable you to arrange the worksheet in various orders, rather on the same line as a database. I would like to have seen far more examples of the macro language as it is this type of feature that gives the gloss to a program.

Functions

The built in function commands, known as @functions, are as full as is likely to be required and covers among others, Absolute values, Average lists, select argument values, Dates, Future values, Hlookups, Net present values as well as all the trigonometry functions and standard arithmetic functions. In all 43 functions are discussed in reasonable depth.

Next is an overview chapter of the menu commands. This discusses Function key, menus and keyboard commands. The majority of the menu commands normally selected with the mouse are available by pressing the / key. This brings up a duckshoot-type menu where the highlight moves in response to the cursor keys, a la Superscript. In some respects I found that this part of the manual easier to follow than the tutorials.The manual finishes with a full glossary and index that appears to cover all the aspects.

Speed

Analyze V2 is certainly a lot quicker than V1. MicroSystems claim up to 6 times faster. Whether this is due entirely to running under Workbench 1.2 or whether it is a combination of improved programming and Workbench 1.2, I don't know. As an idea of speed capabilities I refer you to Jim Kennedy's article on Vizastar in last month's issue. I can't say I was entirely sure how to arrive at the speed example he mentioned. So my version rightly or wrongly multiplied the cell on the left by 1.001 and displayed that result ie. cell A1*1.001 displayed in cell B1. This was copied through to Y25. Jim said he had a sheet of 25*25 cells. If cell A1 was multiplied by 1.001 and the result displayed in cell A2 and so on, then I got hold of the right end of the stick. Anyway, as best as I could measure calculating that sheet took just about 1.8 seconds. Can't be bad in anyone's language. To try a calculation that is much harder I entered the following (3*((+a1*1.001)+1)/0.646)/0.03719. The result ... still around 2 seconds.

Lastly (but by no means least) MicroSystems have provided three examples of Analyze's capabilities and a 'READ ME' file for installing Analyze on your Wb 1.2 The first example worksheet is of an Amortisation table. For those of you of you who are not sure what an amortisation sheet is, think of it as a super-quick way of seeing what your mortgage payments will be in 5 years time if interest goes up 3%. Its 'orrible. The second example is a much simpler cheque recording sheet. Thirdly there is a very good graphics display showing various graphs and what they look like either in 4 or 8-colour mode. It would have been more helpful if some of the activities pertaining to each example were referred to in the manual. For that omission MicroSystems certainly do not score any Brownie points.

Conclusion

The layout and general presentation of the manual I rate highly. The examples are clear and there are many photos to refer to. All in all this spreadsheet has got to be worth a very close look and at £149 or less (talk to the Discounts Officer first) it is a good solid buy.

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REVIEW --- THE AMIGA A2000

Part 1

by John Bickerstaff

(reproduced, by courtesy, from the ICPUGSE June 1987 Newsletter)

It was on a Thursday evening, an ICPUGSE meeting evening, that the Amiga 2000 arrived. It was immediately used in a demonstration given to some 40 members at Biggin Hill. Imagine my horror at seeing the cover removed even before it had been in my sticky hands. However, the hands it was in were those of Trevor Seaton, who has probably serviced more Amiga machines than most other engineers. That is not to say that many Amiga machines have required servicing, especially those owned by ICPUG members. We know for certain that there have been less service calls for members' machines than for those owned by non-members --- Commodore have said so.

With the cover removed, only five screws, everything was visible --- well almost everything --- the power unit is protected by a mesh-type metal cover held in place by further screws (more about that later). Also revealed was the main circuit board complete with five full-length slots: two for IBM PC-type boards, two for IBM AT-type boards or Amiga/PC bridge cards, and three for Amiga cards. A further (memory) slot is fitted with a RAM expansion board which has an extra 512k RAM, making 1.5MB at start-up.

On this machine Kickstart is in ROM, on an extension board, so it can be upgraded if necessary. There is also a video slot for those wishing to attach add-ons like Genlock. The other item of note on the main logic board is a pin connector near to the RS232 port. This connector exactly imitates the A1000 RS232 pin outs. Why?. Because the A2000 is fitted with both serial and parallel connectors in IBM PC form (not as standard because they are not industry standard --- if such a standard exists). From the pin connector a ribbon cable runs to a 25-pin D connector so that the Ruby-Comm dongle can be fitted without the need for a gender and lead changer (Commodore have sensibly moved the 5-volt supply to a pin number not normally used for signal or similar purposes).

The basic system includes a 3.5" (df0) drive with cables, and space for the easy fitting of a second unit (when available) or a 3.5" half-height hard disk drive. There is also space for a 5.25" floppy disk drive and power connectors for this and another similar drive. The power unit is believed to be the same or similar to the one used in the PC40 Commodore AT style/type machines.

To the rear are four D-type connectors: two are mentioned above, the others are for an external disk drive (3.5" or 5.25") and the monitor, both being 23-pin. Have you tried to buy a 23-pin D connector in this country? If you know where to get one, please tell me. The apparent reason for the choice of two sizes of connectors is to ensure that the user does not connect anything in the wrong place, there being two male and two female outlets. This is a good precaution since none of the connectors on the machine are marked. There are two further outlets: phonos for left and right audio channels. There is no composite video output as provided on the A1000. To obtain this a card has to be fitted into the video slot mentioned before.

After the demonstration, which proved that there was 1.5MB available on start-up, the machine was packed up and taken home, where a space had already been prepared for it. It is now in almost constant use, although not exclusively, as this and other articles are produced on the 128 to meet the need of the Newsletter for files on 4040 or 8250 format disks.

Fuses

One setback has to be reported: on the third day, Sunday afternoon, the machine refused to start and the 'POWER ON' indicator did not light up. Eventually the responsible fuse was, with some difficulty, traced: inside the power unit, requiring the mesh cover to be removed in order to reach it. The fuse is located on the base of the unit, hidden below wires and not easy to get at. I did not have a proper replacement so I soldered in a piece of 2 amp fuse wire, and, thank goodness, this worked.

However, that is not quite the end of this part of the story. On talking over this matter with the supplier (and cursing the designer who placed the fuse carrier in such an inaccessable position) I discovered that Commodore have now recommended dealers to fit 3 amp fuses instead of the originally fitted 2 amp fuses. Needless to say the pack of 2 amp fuses purchased were immediately changed for 3 amp versions and one was fitted to the A2000 that evening. Now all is well. I wonder how much it must be costing Commodore in service engineers' charges to change fuses on the ones that got away?

More later --- maybe the bridge cards will arrive soon and enable PC compatibility to be investigated. Even the fitting of an internal 3.5" floppy should enable more software to operate (some have been designed to look for df1 whereas the external drive is automatically designated df2).

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AMIGA KEYBOARD LAYOUTS

by Ken Turner

I have just finished reading the last Newsletter and I must say it goes from strength to strength. The article which caught my attention was Mike Todd's Amiga-Watch column, in particular the piece on Kickstart/Workbench 1.1 and 1.2 compatability. Mike says that some software will not operate correctly under 1.2. He is quite correct. I can say this with some certainty because I have been lucky enough to own an A1000 and recently changed to the new A500. The handbook for the new machine goes into some detail on a function called SetMap, used for re-designing the keyboard layout. The section mentions three USA keymaps as well as those for the rest of the world. They are as follows :-

d	for German keyboards.
e	for Spanish keyboards.
f	for French keyboards.
gb	for British keyboards.
i	for Italian keyboards.
is	for Icelandic keyboards !!
s	for Swedish keyboards.
usa	for standard USA keyboards. (A500 & A2000)
usa2	for Dvorak keyboards.

and usa0.

This last keymap is the important one as it is the original provided with f the Workbench 1.1. The text goes on to mention that some programs may require this keymap to funtion correctly. To use SetMap first select the SetMap tool in the system drawer, choose Info from the Workbench menu and select the Add Gadget. Select the String Gadget between the Add Gadget and the the Tool Types and type 'KEYMAP=' followed by the name of the new keymap. Press RETURN and select the Save Gadget. When the workbench reappers double click on the SetMap icon.

I still use my old machine and am able to try software on both units. There does appear to be a differance in the system software on the two machines as I have tried Digi-Paint, running under 1.2, on my old A1000 with no problems but, on trying the same disk on the 500, it locks up. This tends to confuse matters and if anyone can explain this I would be pleased to hear from them.

One last thing. It isn't possible to use this function on all software i.e. disks which arn't recognised by AmigaDOS (Barbarian etc.) The golden rule is - Try before you buy. I hope the above helps someone, somewhere, somehow.

THE AUTOMATED OFFICE

by Richard G Hunt

Office automation is a wonderful phrase and it has provided a handsome living for computer sales forces, business consultants and others over recent years. It is a buzz phrase that many businesses have adopted. Some regard it as distinct from 'personal computing', the meaning of which is reasonably apparent. If I go out and buy a microcomputer that stands on my desk (and of course I do so with total obeisance to capital expenditure budgets, company guidelines and proper authorisation) I am buying into personal computing. If however my department requires several machines and there are common functions and office support tasks such as letter/note typing, spreadsheet analysis and even communications with the outside world, we may be talking of office automation. It is a moot point: it seems you get Office Automation equipment when you have to support your secretarial support! The difference is that although a single microcomputer can do all this and more, several machines linked together into a cluster or network can do it all at the same time, using shared peripheral devices such as hard disks for file storage, printers and the like. (Personal memo: design a bumper sticker 'My cluster is a shared resource'.)

Being 'Office Automated' doesn't hurt, much. Suddenly machines appear out of huge cardboard cartons together with a technician wielding a small screwdriver. Then comes the difficult bit: learning how to use it all. (Certainly it never behaves like the familiar CBM machine at home....)

There are many different tasks that can be performed. Wordprocessing is probably the most obvious example. Spreadsheets such as LOTUS 1-2-3 or Multiplan, graphics applications for drawing slides and charts, and the capability to send other 'users' messages electronically (electronic mail) or booking a meeting in their diary are some of the other features used frequently. It means learning a whole new jargon that many office workers have never before encountered --- application, user, sign on, logout, systems administrator, directory, cursor, 'return' key, 'function' keys and all the special names for the other vital keys on the keyboard. There is even a new word to describe the skill of using a keyboard: 'keyboarding'! (Oh, what a rich and pliable language we speak!) My favourite story is of a colleague who accidentally cleared the screen leaving only the cursor (the name of which was unknown to him). Summoning assistance, he announced that the machine was broken because it wouldn't stop flashing a light at him. The path to learning is strewn with pitfalls. The systems administrator is there to help in the process, mainly because it is his/her task to learn it all first. As Professor Murphy indicates in the statement of his first law, the way to efficient use of office automation does not necessarily appear overnight. Many companies will be engaged in installing Office Automation equipment during 1987 (note the use of capitals to indicate a Sacred Cow of business). Undoubtedly therefore all those on the receiving end, not to mention those who are merely curious as to what really happens will be fascinated to discover what rules exist to help you up the learning curve. It has been difficult to define the rules that follow so that they carry universal application. The rules below may be subject therefore to re-interpretation without notice.

Rules governing Office Automation installations

1. All pieces of equipment have serial numbers, which are recorded in the asset register of the company. That is, except those that don't. The locations of all equipment and the serial numbers including the lack of them must be recorded in a suitable place prior to executing rule no. 2.
2. All pieces of equipment must be relocated (or shuffled) so that the physical position and associated serial numbers no longer match the original record. A relocation to another floor and/or building is sure to make this task easier. This should take place within 3 months of the installation.
3. Printers that were functioning perfectly in their original location must be moved so that they cause maximum disruption by refusing to work in their new configurations. This is over and above the movement stipulated in rule no. 2.
4. All default margin settings in whatever application must be different from each other so that if a document ever gets as far as a printer it will print on the wrong part of the paper first time. This needs no human intervention. It is a universal law of Nature (The First Law of Information Technology) that computers randomize all print control characters preceding every document.
5. Paper is frowned upon and actively discouraged in the automated office, by order of management.
6. In the automated office paper production trebles overnight. Studies reveal that people tend to send communications to more recipients (by copy) when the document is produced (A) by a manager typing the document himself, and (B) when it is printed by a high quality fast printer. Moreover he creates at least two extra copies for his own files and one for his secretary, so that she knows how good he is at wordprocessing. A further tree is used as the result of the law expressed in rule no. 4.
7. Desk diaries must be replaced by electronic diaries. During parallel running, which may take up to a year depending on how much longer the existing desk diary has to run, each department must ensure that a member of staff is responsible for the monthly agreement of entries. A reconciliation statement should be initialed and filed in duplicate by the senior manager of the department in evidence of this check.
8. Electronic messages are to be sent in preference to any other sort of message. Electronic Mail permits this innovation. Electronic Mail is most suitable when the sender and recipient are on opposite sides of a desk. The sender shall type his or her message and on completion push the screen and keyboard across the desk to his/her colleague with the briefest comment "Message for you". In this way messages may be delivered that would not normally be spoken. Moreover, it is evidence of the proper sharing of expensive resources.
9. All Electronic Mail messages sent and received shall be printed so that a permanent record is maintained by both parties. (Subject to the Statute of Limitations).
10. Any staff in the automated office are not permitted to read any communication printed at a shared printer before it has been collected signed and delivered by the originator. This will prevent premature responses designed to save time.
11. Members of staff who require colour screens are to be reminded that green is a colour.
12. Systems administrators who know the system password may check that an Electronic Mail message they have sent has arrived in their boss's in-tray by logging in to his directory and reading his mail.
13. Home computer hackers are ideal material for systems administration duties. Experience shows that they have more success at causing systems failure than any other user. Also incase they suffer withdrawal symptoms, they should be given a workstation entirely to themselves so that there is no excuse for them not to be tinkering around with something.
14. Communications links with the company's mainframe computer services may be available. Such communications will enable inexperienced users to grab 100% of the mainframe processing capability by diligent attempts to obtain management information. This results in other users being shut out.
15. The Information Centre, or whatever department provides user support, is at the end of a telephone line ready and waiting for your call. There is no truth that a black book is kept of heavy callers (or breathers). No problem however minor is too small for them. They will drop everything to attend to

your problem. They like it especially if you play a guessing game with them by giving the details of the problem with one detail missing. When they have progressed to the next level of skill you may give them wrong information about it as well.

16. Any new installation is unlikely to be hastened by delivery to the project team of a bottle of single malt. Conversely any new installation will be greatly speeded up on delivery of a bottle of single malt to the project team. Try it and see ...
17. Shared cluster resources are to be located at opposite ends of the office. Invariably the person who wishes to use the floppy disk drive will cross paths with the person wishing to use the printer several times as they each pursue their tasks. Placing such devices on different floors of the building is undoubtedly the best policy.
18. The sales force of the supplier will take an interest in your installation - which is right and proper. They will whet your appetite for new software and equipment that is just about to be released on the market. They will tell you the month delivery is expected, but beware: it is another universal law (The Second Law of Information Technology) that all computer manufacturers and suppliers use a hexadecimal calendar. This does not readily translate into the normal human calendar and often leads to confusion. It is almost certain therefore that the hexadecimal calendar has given rise to the expression "lead" time.
19. On no account must the free game supplied with the software be erased in attempts to make more space on the hard disk. Organisational psychologists have determined that it is necessary for all large organisations to have a "shoot-'em-down" facility for all grades of staff in order that they be able to work off pent up aggression caused by daily stresses in the workplace. On the other hand if you wish to face a lynch mob, go ahead.
20. All statements regarding the need to archive or backup material held on disk may be safely ignored. Industry standards are such now that no disk ever fails with an especially valuable document on it. This statement is now made public for the first time because the aforementioned Murphy doesn't seem to have heard of this development.
21. The third universal law of IT is that no computer can spell correctly.
22. On occasions short routines may have to be written for the system in order to make it do some job that it does not do already. If there is a member of staff capable of writing such a routine (as opposed to having it done by a professional consultant) it is essential that he follows the rules of structured programming. Although the following rules were designed for programming in BASIC they apply to all programming tasks equally well. The Basic Rules of Structured Programming (slightly amended): (i) Switch on the machine (ii) Write 20 lines of code (iii) Decide what it is for (iv) GOTO (ii) In the case of APL, rule (iii) should be skipped by all those without a first in mathematics.
23. The fourth law of IT is that no matter what you thought the computer system could do before you bought it, it will not do it the way you intended, if at all, after you have taken delivery and paid for it.
24. Office Automation is a myth. The primary benefit of Office Automation is that it is self-perpetuating. If my job depends on Office Automation, who am I to argue? This document is not necessarily complete. The author would like to hear from any reader who can complement the list.

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SNIPPETS OF HUMOUR

collected by Brian Grainger

A RIDDLE: What key is used for opening files? ANSWER: An ASCII

THOUGHT FOR THE DAY:
Did Beethoven have access to a PC? He did, after all, write his first symphony in 'C'.

ANOTHER THOUGHT:
ADA will probably take five years, and billions of dollars, to bring to a halt.
(attributed to Edward James, Education Consultant at Imperial College)

A TIMELY REMINDER TO THOSE WITHIN ICPUG WHO MAY TAKE THEMSELVES TOO SERIOUSLY
A user group can provide a good opportunity for hotheads to ride their own personal hobby horses ... and to incite a group into taking up issues with the supplier over which the majority has no real concern.
(attributed to Roger Dale, Chairman of IBM Computer Users Association)

REVIEW --- MINI OFFICE II

by John Gardner

Mini Office II by DATABASE SOFTWARE is a very useful suite of programs for use at home, at the club or in the small business. The package consists of six main programs: Word Processor; Database; Spreadsheet; Communications Module; Label Printer; and Graphics utility.

The programs work on a 64 and 128 in 64 mode with 1541, 1570, 1571 disk drives and tape drive. If you boot the menu program in 128 mode, the 128 is automatically switched to 64 mode. If loaded from tape, further loading and saving functions will default to tape.

Mini Office II is protected beyond the reach of standard copiers, and will not, at present, load on early or non-Commodore drives, such as the Enhancer or Excellerator+ drives [see Discounts Corner for latest details - Ed.], though whether it is this protection or the incorporated fast loader that makes the program 'lock up' I am unsure.

The main menu screen slow loads and gives the option of the six main programs, selected by cusor keys and RETURN. Upon selection, a fast load is activated and the chosen section speedily boots in. A second menu is offered detailing the functions available, and individual features such as disk setups and printer types can be accessed by further and more specific menus.

Word Processor

The Word Processor has most of the standard functions required for composing a letter, using embedded commands similar to Superscript for setting up the layout and print type required. There is a complete screen editor with logical and well thought out protocols, and full MOVE, DELETE, COPY, and INSERT commands by block, line, word, or character. Some of the other commands available are TOGGLE INSERT/OVERWRITE mode, DISPLAY TYPING SPEED, and SEARCH for a character. A mail merge facility is provided to personalise leters retrieved from a database list by field numbers.

The text can be previewed on the screen before printing, with the facility for optional headers and footers. Large documents (over 30,490 characters) are handled by the GET FILE command. A wide range of printers are supported including both Centronics and RS232, as well as the more common Commodore and Epson compatible types. Files can be saved to disk or tape as Mini Office II files (readable by Vizawrite Classic) or ASCII files (readable by everything) with appropriate filename extensions

Database

The database can cope with up to 20 fields and a total record size of 2048 characters, though in most cases this is quite sufficient. All records that have been selected from the database are resident in the computer's memory, give speed but limiting the database size, which is controlled by the overall size of the record. Each field can be given a name, and its type can be set to integer, alphanumeric, date, or decimal, up to 60 characters long, limited by the total record size. Each field can be set to be a force field if necessary.

Records can be viewed and amended by using the cursor keys to 'browse' through the database, and there are further options to search and mark, sort, calculate, edit, and clear data.

Spreadsheet

The Spreadsheet is limited to 4000 cells of 120 columns by 99 rows with column and row widths between 5 and 20. 18 mathematical formula including TAN, LOG and SQR are provided, but not an alphabetical sort. Individual cells can be set for right, left, or centre justification, and up to 4 decimal places can be displayed. Text larger than the cell's width may be entered, and there are a total of 26 CTRL key commands for specific functions such as automatic cursor movement, locking, unlocking and copying cells, rows and columns. The whole spreadsheet, including data and formula can be printed out, and if too wide for the printer, by printing out single sheets that can then be joined up.

The spreadsheet was found to be quite fast (Jim Kennedy's test program ran at 8.10 seconds) and easy to use but if a file was loaded and then saved the program neither defaulted to this name nor prompted the last name.

Graphics

The graphics part of this program will display high resolution bar charts, line graphs and pie charts to screen or printer. Up to 20 items of data, which can be taken from the spreadsheet or keyboard, are entered for each chart or graph, and 3 sets of the 20 values can be displayed at any time. Individual screens may be saved for use in other programs. There are further options for 3D barcharts, auto scaling, underline and entering of text.

Label Printer

Data selected from the database by field no. can be printed as labels in the order that you have chosen. The position of each field to be printed can be set (more than one can be printed on each line subject to the line length), and each field can be positioned on the label. Full settings are provided for printers with 10 to 250 characters, and up to 7 lables across.

Communications

The comms part of this package allows you to use the standard Commodore modem or an RS232 modem from the user port (with RS232 interface). Microlink/Telecom Gold software is provided, but for other systems fully selectable protocols are available. It is possible using this highly adaptable option to link your computer to some other remote device such as an optical character reader, or a second computer. It is, in fact, the only package I have come across that allows me to read documents into a buffer using my Omni Reader OCR (with custom-made RS232 cable), edit that data (using the word processor), and re-print it in a different type-face. Jim Kennedy, our Chairman, tested the modem side of the package and found it 'easy to use and not lacking in features'. In fact, when first demonstrated the comms by Steve Gold (of hacking fame), he believed the retail price of Mini Office II related to the comms package alone, and thought it good value!

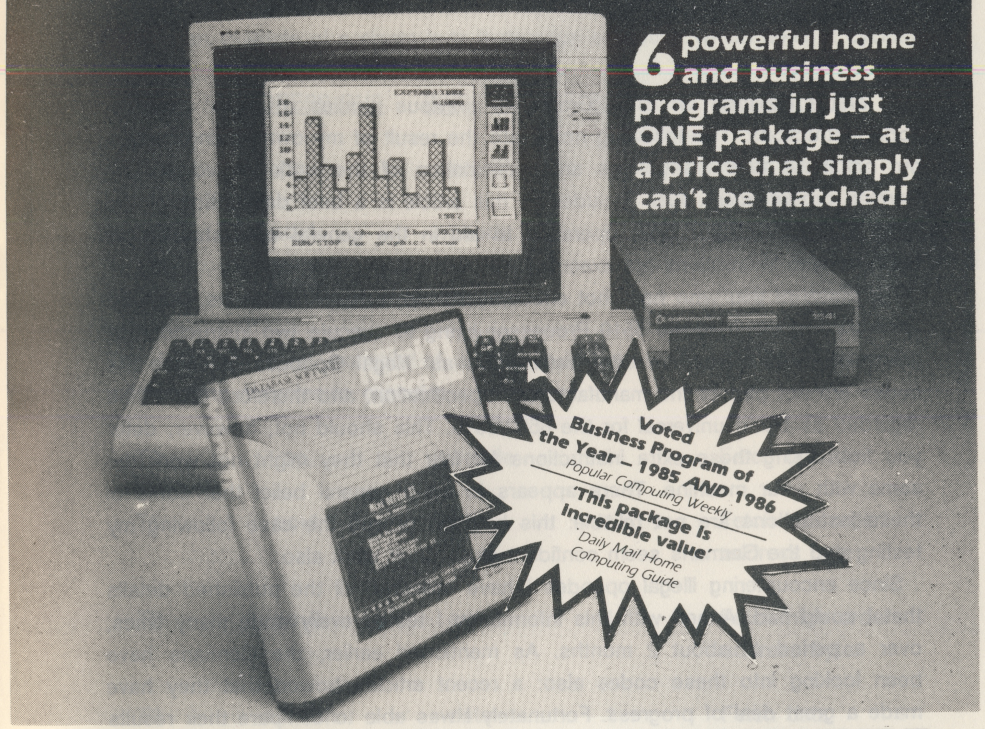
Manual

Last, but not least, the manual. Although small, about 4 inches square (A5 size approximately) it is very well printed, with good headings. It is easy to read and understand, and consists of 90 pages on a spring wound spine (essential for business packages), and comes complete with screen display examples and control summaries for the word processor, spreadsheet and communications packages. One criticism, though - no contents or index pages.

Conclusion

The word processor is very handy for letters and small documents, but I am more used to Vizawite and Superscript which are more powerful to use, but of course a lot more expensive. I found the spreadsheet very easy to use and I suspect it will meet most normal requirments. The database is of reasonable size for the address book/club records type of application, and I thought it easy to set up. However, I could not easily view records that I had marked, unless I saved them out as a file, reloaded that file and then viewed the records. The label printer program is very useful as a stand-alone program as you can specify the fields, the order that they are printed, and the number of labels across.

All in all, Mini Office II is unbelievable value for what it offers. I would recommend it to any non-business user as an introduction to the wonderful world of word processors and data manipulators, to a small business (I do stress small), or club for running membership and accounts. I would especially recommend it to owners of arcane or obscure RS232 devices, in fact, to anybody! Nice one, Database.


6 powerful home and business programs in just ONE package – at a price that simply can't be matched!
Voted Business Program of the Year – 1985 AND 1986
Popular Computing Weekly
'This package is incredible value'
Daily Mail Home Computing Guide
Mini Office II
DATABASE SOFTWARE

Mini Office II

WORD PROCESSOR
Compose a letter, set the print-out options using embedded commands or menus, use the mail merge facility to produce personalised circulars – and more!

SPREADSHEET
Prepare budgets or tables, total columns or rows with ease, copy formulae absolutely or relatively, view in either 40 or 80 column modes, recalculate automatically – and more!

GRAPHICS
Enter data directly or load data from the spreadsheet, produce pie charts, display bar charts side by side or stacked, overlay line graphs – and more!

DATABASE
Build up a versatile card index, use the flexible print-out routine, do powerful multi-field sorting, perform all arithmetic functions, link with the word processor – and more!

COMMS MODULE
Using a modem you can access services such as MicroLink and book rail or theatre tickets, send electronic mail, telex and telemessages in a flash – and more!

LABEL PRINTER
Design the layout of a label with the easy-to-use editor, select label size and sheet format, read in database files, print out in any quantity – and more!

DATABASE SOFTWARE
Europa House, 68 Chester Road,
Hazel Grove, Stockport SK7 5NY

ORDER FORM

Please send me Mini Office II for the Commodore 64/128

☐ £16.95 cassette
☐ £19.95 5¼" disc

I enclose cheque made payable to Database Software, or debit my Access/Visa card:

☐☐☐☐

£3 Off for ICPUG members
See "Discount Corner" for further details

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ORDER HOTLINE:
TEL: 061-480 0171

SEND TO: **Database Software,**
Europa House, 68 Chester Road,
Hazel Grove, Stockport SK7 5NY.

ICP

ILLEGAL OPCODES - A DEFINITIVE STUDY

by John Farnell

This article expands on Brian Grainger's previous studies of 'extra' machine code instructions. The following notes are the result of my own testing carried out on these new instructions and examination of the work carried out by German programmers. Also included in this article is a brief description of the MPU (Micro-Processor Unit) operation to aid in the general understanding of how machine instructions are executed.

For those of you who have not encountered these new instructions, they are generally the result of the 6510 Processor trying to execute two instructions at the same time. These are often referred to as 'Illegal Opcodes' because the codes are not part of the manufacturer's specification, and therefore cannot be regarded as being universal for the 6502/6510. This should not, however, deter you from using these extra instructions for fear that they might not work the same with your machine. There appears to be a general belief that some of these instructions are not reliable: this has not proved the case following my testing and the Germans seem confident about their work also.

Since encountering illegal opcodes I have collected all the published details that I could find. Armed with this information I tested every code many times, over a period of about 2 months. As mentioned earlier, the Germans have been looking into these codes also: a recent article showed that they have made a great deal of progress. Fortunately I was able to compare their results before submitting this article and was pleased to see that we have obtained the same results as far as their list goes. They have only missed out a couple of opcodes, which means (hopefully) that we now have every illegal opcode defined and confirmed as correct.

Before starting instruction testing I thought that an insight into it's operation might help to see how the hex value of the instruction code defines its function. This might then indicate what the function of the unknown instruction should be.

To begin to understand the operation of an instruction we must first look at the internal workings of the 6510 series processor, with essentially the same internal hardware as the 6502 to maintain compatability. Instructions to be processed are presented on the data bus during the last 100 nano-seconds of the phase 2 clock pulse, and there is no attempt to execute the data in this short period. Instead, it is transferred into the input data latch. This latch captures data onto the data bus during every phase 2 cycle, and the data is then transferred onto the internal busses and registers during the following clock pulses.

Here is an example of a single byte instruction execution which takes 2 cycles.

TN	ADDRESS BUS	DATA BUS	R/W	COMMENTS
T0	pc	opcode	1	Fetch opcode
T1	pc+1	opcode	1	Discarded
T2	pc+1	opcode	1	Next instruction

The following is an example of a 3 byte instruction in absolute addressing mode taking 4 cycles to execute.

TN	ADDRESS BUS	DATA BUS	R/W	COMMENTS
T0	pc	opcode	1	Fetch opcode
T1	pc+1	adl	1	Fetch low order address byte
T2	pc+2	adh	1	Fetch high order address byte
T3	adl,adh	data	1	Fetch data
T0	pc+3	opcode	1	Next instruction

The above cycle description shows the contents of the respective busses after each Control Unit operation (micro-instruction). NOTE: the Processor often outputs an address and fetches data which is subsequently ignored. This is an inherent feature of the 65xx series of Processors which use a 'look ahead' approach to pipelining.

The Pipeline Concept

This is the process of fetching the next memory location while interpreting the current data from memory, minimising the operation time of a normal 2 or 3 byte instruction. The main point to note is that during every clock cycle, memory is either read or written and simultaeously an internal operation of the Processor occurs.

The Pipeline Effect In Operation

CYCLE	EXTERNAL ACTION	ADDR.BUS	DATA BUS	INTERNAL ACTION
1	Fetch opcode	C000	ADC	Increment pc to C001
2	Fetch first address byte from memory	C001	adl	Increment pc to C002 Interpret ADC instr.
3	Fetch second addr. byte from memory	C002	adh	Increment pc to C003 Hold adl
4	Fetch operand from memory	adl,adh	data	Load in data held at the address pointed to by adh (high) and adl (low)
5	Fetch next opcode from memory	C003	STA	Increment pc to C004 Execute ADC
6	Fetch first address from memory	C004	adl	Increment pc to C005 result of add to accumulator, interpret STA instruction .

From the above example it can be seen that an instruction can sometimes be executed before the completion of its cycle time. This is usually unimportant when machine code programming, but it can be critical when dealing with timers. As an example, when writing a cycle time test program I had to write a section of code that timed each individual instruction. When calculating the time taken for the test instruction I had to deduct cycle time taken for the LDA and STA instructions to switch off the timer.

If you own a manual with instruction cycle times listed you will find that an LDA #$08 and STA $DD0E take 2 and 4 cycles respectively, but upon testing the timing routine using standard machine instructions I found the result to be 1 clock cycle short. Obviously the pipeline effect meant that the instruction STA $DD0E was effective on the third clock cycle of the instruction. The fourth cycle was used to fetch the next instruction.

Instruction Coding

Once an opcode enters the instruction decoder, signals are sent to the registers to control the function of the instruction. It can therefore be assumed that it's bit pattern must cause the relevant signals to be generated. As a starting point I decided to examine the bit patterns of similar type, normal machine instructions, to see if the bit structure revealed individual characteristics. After extensive examination of the whole instruction set, including those unimplemented opcodes already known about, I found some interesting results:-

Those normal instructions with the first two bits being 01 (ie xxxxxx01) had bit patterns that could be reduced to show individual characteristics. These instructions also have a unique 5 bit identifying sequence for each type.

000x xx01	ORA
001x xx01	AND
010x xx01	EOR
011x xx01	ADC
100x xx01	STA
101x xx01	LDA
110x xx01	CMP
111x xx01	SBC

These instructions have a unique 5 bit identifying sequence. An interesting point to note is that they are all Accumulator type instructions.

There are also a few unimplemented opcodes which conform to this rule, but with the first two bits being 11.

000x xx11	ASO (asl/ora)
001x xx11	RLA (rol/and)
010x xx11	LSE (lsr/eor)
011x xx11	RRA (ror/adc)

These are unimplemented opcodes with a unique 5 bit identifier. The interesting point about these is that they are all combinations of Accumulator and shift instructions

For all of these instructions the 'x' symbol indicates a specific property for the function of the instruction to be used. In all the above cases bits 2, 3 and 4 alter the instruction's function in exactly the same way. Their meanings are as follows:-

BIT 4	Indicates if the instruction is indexed (1) or not (0).
BIT 3	Indicates if the addressing mode is zero page (0) or not (1).
BIT 2	Indicates the mode selection once bits 4 and 3 are determined: if indexed and zero page then 1 = X indexed and 0 = Y indexed.

000 - (Z,X)
001 - ZER PG
010 - IMM
011 - ABS
100 - Z,Y
101 - Z,X
110 - ABS,Y
111 - ABS,X

It can be seen that these 3 bits uniquely identify the addressing mode of those instructions on the last page.

Branch instructions can also be broken down into their component sections:

xxx1 0000 - uniquely identifies the group of 'branch type' instructions.

There are basically 4 types of branch instruction:

00xx xxxx branch on negative flag (n)
01xx xxxx branch on overflow flag (v)
10xx xxxx branch on carry flag (c)
11xx xxxx branch on zero flag (z)

Each of these branch types are further identified by bit 5 being either (a) Branch on flag = 1, or (b) Branch on flag = 0.

Instruction Trends

There are many such characteristics that can be drawn from the rest of the instruction set. The general trend is that similar instructions (eg BPL, BMI, BNE, BEQ etc) contain a number of bit patterns that can be seen to identify individual characteristics. These patterns are not always relevant or consistent to other instruction groups, and therefore make it difficult to determine the exact function of the new instructions.

New Opcodes

After deciding the most likely function of the unimplemented opcodes, each one had to be tested in various areas of memory to ensure it behaved exactly the same way in all conditions. The easiest way of testing these was to use a Monitor/Disassembler to test the new codes throughout the pages of RAM, since a straight machine code program wasn't able to provide the flexibility required to test each instruction fully.

Illegal Opcodes

The following table displays the code results once my testing had been carried out:

INST	ABS	ABS,X	ABS,Y	(Z,X)	(Z),Y	ZRPG	Z,X	IMMD	Z,Y
ASO	0F	1F	1B	03	13	07	17	.	.
RLA	2F	3F	3B	23	33	27	37	.	.
LSE	4F	5F	5B	43	53	47	57	.	.
RRA	6F	7F	7B	63	73	67	77	.	.
OAL	.	.	.	.	.	.	.	AB	.
SSH		.	9B	.	.	.	.	.	.
SYH	.	9C	.	.	.	.	.	.	.
SAH	.	9F	.	.	93	.	.	.	.
SXH	.	.	9E	.	.	.	.	.	.
AST	.	.	BB	.	.	.	.	.	.
AXS	8F	.	.	83	.	87	.	.	97
LAX	AF	.	BF	A3	B3	A7	.	.	B7
DCM	CF	DF	DB	C3	D3	C7	D7	.	.
INS	EF	FF	FB	E3	F3	E7	F7	.	.
ANC	.	.	.	.	.	.	.	0B,2B	.
SBC	.	.	.	.	.	.	.	EB	.
ALR	.	.	.	.	.	.	.	4B	.
ARR	.	.	.	.	.	.	.	6B	.
XAD	.	.	.	.	.	.	.	8B	.
SAX	.	.	.	.	.	.	.	CB	.

There are also a number of codes that perform the same function with different hex values:

SKB	04,14,34,44,54,64,74,80,82,89,C2,D4,E2,F4
SKW	0C,1C,3C,5C,7C,DC,FC
NOP	1A,3A,5A,7A,DA,FA
CSH	02,12,22,32,42,52,62,72,92,B2,D2,F2

Status Register Flags

Care must be taken when checking flags after illegal opcodes are used, since most of them execute more than one instruction. This can cause a flag to be set by the initial part of the opcode and cleared by the next. An example of this type of instruction is ARR, where the standard function ROR is performed on the memory location addressed as the first part of the pseudo opcode.

This function shifts the byte right one bit with bit 0 going into the Carry, which itself goes into bit 7. Hence bit 7 may be set or cleared depending on the Carry and then possibly reversed by the next part of the ARR instruction which ANDs the result with the Accumulator. This effect occurs in a number of illegal opcodes, not necessarily a disadvantage, but something to be wary of. The general rule would seem to be that if there is more than one instruction in the opcode then the flags are left in the state that the second part of the combination set them.

Cycle Timings And Flags Affected

INST	ABS	ABS,X	ABS,Y	(Z,X)	(Z),Y	ZRPG	Z,X	IMMD	Z,Y	NV.BDIZC
ASO	6	7	7	8	8	5	6	.	.	x xx
RLA	6	7	7	8	8	5	6	.	.	x xx
LSE	6	7	7	8	8	5	6	.	.	0 xx
RRA	6	7	7	8	8	5	6	.	.	xx xx
OAL	.	.	.	.	.	.	.	2	.	x x
SSH	.	.	5	.	.	.	.	.	.	x x
SYH		5	.	.	.	.	.	.	.	x x
SAH	.	5	.		6			.	.	x x
SXH	.	.	5	.	.	.	.	.	.	x x
AST	.	.	4*	.	.	.	.	.	.	x x
AXS	4	.	.	6	.	3	.	.	4	x x
LAX	4	.	4*	6	5*	3	.	.	4	x x
DCM	6	7	7	8	8	5	6	.	.	x xx
INS	6	7	7	8	8	5	6	.	.	xx xx
ANC	.	.	.	.	.	.	.	2	.	x xx
SBC	.	.	.	.	.	.	.	2	.	xx xx
ALR	.	.	.	.	.	.	.	2	.	0 xx
ARR	.	.	.	.	.	.	.	2	.	x xx
XAD	.	.	.	.	.	.	.	2	.	x x
SAX	.	.	.	.	.	.	.	2	.	xx xx

* Add 1 if page boundary crossed

SKW	4	no change
NOP	2	no change
CSH	N/A	N/A

SKB	04	14	34	44	54	64	74	80	82	89	C2	D4	E2	F4	
	3	4	4	3	4	3	4	2	2	2	2	4	2	2	no change

Instruction Functions

In all these cases DATA means the byte following the instruction when in immediate addressing mode. X and Y refer to the X and Y registers, SP is the stack pointer, and Acc is the Accumulator. AND, EOR and ORA are logical operations, ADC and SBC are arithmetic.

ASO - ASL memory, ORA the result with the contents of the Accumulator
RLA - ROL memory, AND the result with the contents of the Accumulator
LSE - LSR memory, EOR the result with the contents of the Accumulator
RRA - ROR memory, ADC the result with the contents of the Accumulator
OAL - ORA Accumulator with #$EE, AND the result with DATA, then TAX
SSH - Store Acc AND X in SP, Acc AND X AND Hi byte+1 in memory (note1)
SYH - Store only Y AND Hi byte+1 in memory (note 1)
SAH - Store Acc AND X AND Hi byte+1 in memory (note 1&2)
SXH - Store only X AND Hi byte+1 in memory (note 1)
AST - Store the result of SP AND DATA from ABS,Y in Acc, X and SP
AXS - Store the result of Acc AND X in memory, Acc and X unaltered
LAX - LDA from memory and LDX from memory with the same data
DCM - DEC memory and CMP the result with the Accumulator
INS - INC memory then SBC the result from the Accumulator
ANC - AND DATA plus N flag into Carry
SBC - Performs the same function as the original (#$E9)
ALR - AND the Accumulator with DATA then LSR the result
ARR - AND the Accumulator with DATA then ROR the result
XAD - Store Acc AND X AND DATA in Accumulator
SAX - SBC DATA from (Acc AND X) and store in X, Carry set automatically
SKB - Skip byte (branch of +1)
SKW - Skip word (branch of +2)
CSH - System crash, IRQ line no longer active, screen goes blank
NOP - This performs the same function as before (#$EA)

Note 1. Hi byte refers to the Hi byte value of the absolute address ie, for address $ED07 the Hi byte is $ED, add 1 to this and this is ANDed with the other registers for that instruction.

Note 2. For the opcode SAH (Z),Y ($93) the Hi byte of the memory location to be addressed is stored in the second zero page address. For example: for SAH ($FB),Y the Hi byte is stored in $FC, so if $FB=00 and $FC=C0 then the Hi byte used by this instruction would be C0, and the result of Acc AND X AND C0+1 would be stored in $C000,Y.

Conclusion

Some of the opcode names may be different to those seen published before. The reason that I have renamed certain opcodes is to remove the confusion caused by programmers giving conflicting names to the same opcode. As far as possible I have used the names already given to the 'illegal opcodes' previously discovered and correct. I have used some of the German names on incorrect or undiscovered opcodes because they are more meaningful, hence the list of names contained here should be the best combination of all previous ones.

As I mentioned earlier, I have carried out extensive testing on these instructions, but only have access to a few machines. It's reassuring to know that the Germans have found the same results as my tests show, but we can only make these codes a known reliable standard if everyone achieves the same results. It would be to all our benefits if you would test these codes and submit your answers. If you write to me at the address below, I will write a short note for the next issue of ICPUG about the results obtained. Hopefully if we get a good response we will all know how reliable these instructions really are. Please write to: 176 HOOLE RD, HOOLE, CHESTER, CHESHIRE CH2 3NX

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REVIEW --- ARTIST 64 AND NEOS MOUSE

by Tony Wright

While this is mainly a review of Artist 64, it is not practical to achieve this without first reviewing the Neos Mouse and CHEESE program in very broad terms.

Neos Mouse and CHEESE

The Mouse comes with two buttons on top and a lead of sufficient length for all normal requirements. With CHEESE, only the right-hand button is used. The mouse moves the cursor about the screen very smoothly and accurately. The x,y position of the cursor is shown at all times. An accompanying leaflet covers briefly all aspects of CHEESE, but the best way of learning the program is to experiment.

The various options are selected using Icons. Moving the mouse to the icon and pressing the right-hand button brings in the selected option. The main menu contains three icons: Undo, Tile Patterns, and Function Select. The first is self-explanatory, the second is a series of some 20 odd patterns which can be used when filling an enclosed area, and the third selects one of three sub-menus each of seven icons. The three sub-menus cover the following options: Straight Line, Magnify, Pencil Thickness, Solid Line Draw, Palette, Mirror, Dotted Line Draw; Paint, Load, Box, Clear Screen, Save, Box Fill, Scroll; and Print, Circle, Copying, Spray, Circle Fill, Reverse, Canvas Colour. Most of these are self-explanatory but one or two require some amplification.

Most drawing functions are carried out by placing the drawing cursor on the screen and clicking the right-hand button to determine one end of a line, one corner of a square/rectangle, or the centre of a circle or ellipse. The cursor is then clicked at the other end of the line, the opposite corner of the square or rectangle or the circumference of the circle or ellipse and the line or shape is drawn. Very quick and very easy.

Canvas command sets the colour of the paper and in every drawing mode a palette is provided to change both the ink and border colours as many times as you like, providing of course, one accepts the Commodore restriction of not more than four colours in a 4X8 pixels character cell. Even this can be carefully constructed if the magnify command is used with discretion.

Filling in of enclosed areas with a plain colour or any of the optional patterns is easily accomplished with the paint or box/circle fill options.

Any part of the picture can be copied and reproduced anywhere on the screen. One can only, however, save the whole screen. Reverse and Mirror are self-explanatory. The spray function can use plain colour or you can spray a pattern in any colour.

There are no facilities for producing text on the screen. The pciture can be printed out but but only on an MPS 801 or 803, or a Vic 1525. Those with Centronics printers may be a little unhappy about this, but a printout can be obtained with the The Final Cartridge in the usualway, but you must remember to disconnect the Mouse first.

As I say, I found the Mouse very smooth in operation, and the software can produce some very interesting and complex pictures, considering its price. However, I must issue a warning: some heavily discounted disk software may not be the original Wigmore House product and there are some slight differences in the manner in which pictures are saved/loaded to disk.

One other feature is that one can use the Mouse in joystick fashion in your own programs by holding down the left-hand button while turning on the C64.

Artist 64

It is very difficult to know where to start as this program offers so many of facilities. The package contains two disks (program and system disks) and a manual. The latter may seem rather short, but all the commands etc. are explained and to try and include every possible combination of the various optiions would mean a very complex and bulky manul indeed. What Wigmore House have done is to supply two demonstration programs on the system disk that take you through a large number of the possible operations step by step. As the manual says, your art work is only limited by the extent of your imagination.

Icons are not used and I can see why. There are so many commands, functions and options (permutations give some 250,000, according to Wigmore House) that it would not be possible to put icons up on the screen and at the same time leave sufficient room for a picture. Instead, the commands,functions and options appear on the whole screen, with the left-hand mouse button switching between menus and the screen. There are three menus: Main, I/O, and Special Effects. The right-hand button selects the commands and is used for the majority of the drawing actions.

The software provides all the normal drawing options you would expect but it goes much further than most programs in that not only can you draw and fill with sprites, patterns and brushes but you construct these patterns and brushes on a separate screen. Sprites can be copied off the main screen and then used in drawing and filling. A separate menu associated with Input/Output allows you to store patterns, brushes and sprites on tape or disk for future use. You can draw or fill in one single colour or, by using the cycle command and a selection of colours, you can draw, brush or fill with a kaleidescope of colours stepping through these colours in whatever sequence you desire. The timing of this cycling can also be altered. It is possible to stipulate that certain colours cannot be drawn over by using the Protect command. These can be screen or background colours. Interweaving of colours is, therefore, possible as well as the production of 3D effects.

It is possible to put any size of text on the screen by the use of the Text Command and using an on-screen keyboard. Other commands also enable you to obtain Italicised text or vertical text. A window can be created on the screen and all operations confined to that area. The program will also remember the Cursor position when drawing starts or at any time during the creation of the drawing and very special effects can be created using this command such as ray lines.

So far as the Input/Output menu is concerned, apart from those functions I have already described associated with saving sprites etc., one can save and load the screen as one would expect. It is also possible to obtain a catalogue of the disk directory under any of the 4 headings. Facilities are available to print what is on the screen and in this case Commodore and Epson printers

(plus some Epson look-a-like's) are covered. The printout is shaded according to the density of the colour being reproduced.

The following is a list of all the Commands, Functions, and Options:-

Circle, Clear Options, Border Is, Copy Block, Clear Window, Brush, Draw, Cut Out Sprite, Continuous, Ellipse, I/O Menu, Cycle, Fill Area, Main Menu

Gridlock, Line, Set Protection, Horizontal, Magnify, Spec. Effects, Limit, Rectangle, Undo/Swap, No Undo, Remember C.P., Paper Is, Replace, Pattern

Screen Window, Polygon Is, Text, Protect, Triangle, RCP Is, Solid, Sprite, Text Size Is, Time Is, Unlock, Use Last, Vertical, Without

As you will appreciate I have only touched on the simplest of descriptions of the various capabilities of this program. I doubt if anyone could explore all its facets in a relatively short period but, if anyone has a specific query I would be happy to try and answer it. There are, however, two more very useful features of this package.

Firstly, it is possible to load a picture file into your own Basic program. Secondly, despite the recent comments of Rae West in the letters column of the C.C.I. magazine, a program is provided for reading the mouse from within your own programs, a real boon for anyone who prefers a WIMP environment [Maybe Rae has one of the cheap packages? - Ed]. Both these programs are contained on the Systems Disk.

Conclusions

All-in-all a most impressive package. I could not possibly say it is easy to use first time out but once you get used to the system it is positively amazing how quickly you can conjure up quite complex pictures. Each time the program is loaded it is possible to find some new combination of features which you had not experienced before.

I cannot think of anything this program cannot do graphically except, possibly, draw your pictures for you and I would happily recommend it to anyone who is interested in creating graphics or artwork.

Artist 64 is published by Wigmore House at £29.90, but do contact the Discounts Officer for details on members special offers.(If you wish to contact Tony his address is:- 3 Algarth Rise, Stockton Lane, York, YO3 0HD. Don't forget an SAE for his reply.)

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DEMO OF PRINT CAPABILITIES
with the Hewlett-Packard LaserJet printer
and VizaWrite Classic 128 using the U Font cartridge

by Jim Kennedy

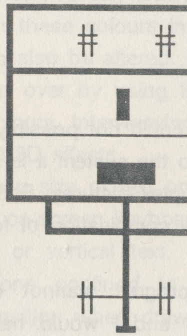
Notice that the text is proportionally spaced, that is ten letter i's [iiiiiiiiii] and ten letter m's [mmmmmmmmmm] take up differing amounts of space. The text is right aligned even when one uses special fonts **like** these. The top line is a 14 point font, the next one is 12 point and the third one is 10 point. The body of this paragraph is 8 points. All are Helvetica with the top three lines being in **BOLD** style.

One may also have mono spaced text in Letter Gothic like the table below where use of proportional spacing messes things up.

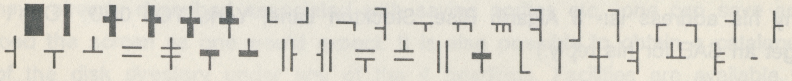
TABLE

ITEM	DESCRIPTION	QUANTITY	COST
nut	BA6	12	£123.45
bolt	BA6	24	67.89
nut	BA4	6	1.23
bolt	BA4	6	.45

LINEDRAW CAPABILITY



Plus other characters some of which are printed below:



- And the two resident typewriter style fonts are also available but we are out of space.

THE MPS1000 AND C-64

by Brian Grainger

I start with a bit of culture. A recent letter to me from Ernest (Bilko) Baker commenced with the following poem:

> Only received my ICPUG info. today!
> I have some problems, my ignorance in the main,
> But to you, I introduce myself if I may?
> An O.A.P. I am, and it's getting very late.
> So I have to make the very most of everyday.
> Eccentric maybe; probably still a child,
> But learning is my hobby, subjects 'wild'.
>
> A Commodore 64, MPS1000, cassette and 1541,
> I use this little rig as my typewriter,
> My handwriting's awful, typing's just fun.
> My Wordpro was taken from 'Your Commodore',
> There are better, but not within my pocket.
> Play games; then from the wife a rocket!
>
> I am afraid the jargon leaves me very cold,
> Languages were never really my forte,
> Tried French, German, and morse of old,
> But computer talk I cannot put to thought.
> And with programming of course I stick to BASIC.
> But for me, 'hands-on' usually does the trick?
>
> However, though I'm happy with my MPS1000,
> I would like to use its versatility,
> Although the manual I've really pounded,
> And Commodore replied to my little ditty.
> But I am sorry to say, I have failed to comprehend.
> How to get IBM (lower case) at the printer end?

Ernest went on to say that he wanted to try out different fonts in a word processor. This letter set me thinking. Myself and others have written in the past on either using the MPS1000 with an Amiga (when it is in IBM mode) or using it with a 64 (when the MPS1000 is usually in 64 mode). Not a lot has been said about using the MPS1000 with a 64 in IBM mode. I hope to rectify that here.

The MPS1000 is probably Commodore's best low-cost dot matrix printer to date. Unlike previous offerings it is a badge-engineered product (Epson LX80) WITHOUT removing the facilities of the original. Because it is fitted with both a Centronics parallel interface and Commodore serial bus interface it can be used with a 64/128/Amiga without additional hardware interfaces. One of the problems in the past of buying a non-Commodore printer is that it has usually needed some form of hardware interface and possibly a software interface too. Thus you cannot guarantee compatibility with all software products. This problem does not bedevil the MPS1000 and therefore makes it a really useful printer. At the flick of a DIP switch it can act as an Amiga printer or as a 64 printer. Ernest's questions relate to trying to get at the non-Commodore facilities of the printer (such as elite or condensed mode printing, super- and subscripts, etc.). To get at these facilities it is best to have DIP switches 1.1, 1.3 and 1.8 of the MPS1000 set ON with the others OFF. In this mode the printer uses standard ASCII rather than PETASCII for its character code, and this results in a problem in printing lower case.

Let us look at the various codes for the alphabetic characters. For the keyboard codes I am assuming the display is in upper/lower case mode, obtained by pressing the Commodore and shift keys together on the 64. I also assume upper/lower case mode, secondary address 7 with the MPS1000 in Commodore mode, for the PETASCII codes.

Character	Keyboard	PETASCII	ASCII
A	193	193	65
.			
Z	218	218	90
a	65	65	97
.			
z	90	90	122

As you can see, Keyboard to PETASCII conversion is a doddle, but keyboard to ASCII is not. In fact the ASCII codes for a-z, 97-122, cannot be obtained from pressing any keybard keys so the only way of producing them from BASIC is to use the CHR$() function. I have produced a little routine in BASIC (convert) which will take in the keyboard codes above and convert them to ASCII. A little demonstration is coupled with it to show how to use it.

```
100 rem mps1000 printing in ibm mode
110 open 4,4
120 s$="abcdefABCDEF"
130 print s$
140 for i=1 to len(s$)
150 : a$=mid$(s$,l,1)
160 : gosub 300
170 : s$=left$(s$,i-1)+a$+mid$(s$,i+1)
180 next i
190 print#4,s$
200 close 4
210 end
250 :
300 rem proc convert
310 : a=asc(a$)
320 : if a>=65 and a<=90 then a=a+32
330 : if a>=193 and a<=218 then a=a-128
340 : a$=chr$(a)
350 return
```

(N.B. I make no apology for the added COMALisms of the above. While the ':' and rem in the above example are not necessary for execution I find the program easier to read that way)

The above routine is not very fast but it illustrates what has to be done. To do the job quickly and efficiently one must use a better language than BASIC or a machine language subroutine. An example of the former is the COMAL cartridge for the 64/128 which allows you to define, when opening the file to the printer, that PETASCII to ASCII conversion must take place. Is there anything this cartridge will not do I hear you ask! (Not much, I hear the COMALites reply!).

Machine language interfaces for PETASCII to ASCII conversion are included with most commercial word processor packages. Easyscript, the ubiquitous word processor for the 64, has the option to define the printer output as MX80 format. This is close enough for using an MPS1000 in IBM mode. In addition to getting upper and lower case right you will then also be able to get those other facilities I mentioned earlier. The September issue of 'Your Commodore' had an article on how to do this.

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REVIEW --- THE PSION ORGANISER

by Rev. D Connolly

Many of us who make use of a microcomputer database would benefit from the portable facilities offered by the Psion Organiser, which is now widely available in retail stores. Having information on your micro is fine when it is convenient to get at, but I often find it inconvenient for a variety of reasons. The Psion machine has offered a way out of this particularly so because I have now managed to make my CBM 128 talk to the Organiser via the RS232 options.

The Organiser itself is a mighty powerful machine, often seen in use in supermarkets keeping a watch over pricing and stocking levels. It is a hand-held machine with a 36 key alpha-numeric keyboard and 36 character scrolling display. It allows instant access to data and programs stored within the battery powered device. The two basic machines available offer 8K or 32K of memory for the CM and XP models respectively, although it should be noted that on my 32K machine only 24K is actually available for direct use. The machine can be expanded using the two EPROM ports available, which on my XP model will each take a 128k pack. These EPROM ports can also be used to plug in specific applications packs which include finance, maths, dictionary, and even a wordprocessing package!

At its most basic level the machine offers from the opening menu at switch-on a diary, a clock, a calculator, and an unconfigured database. This latter item simply allows the user to enter data onto a record in any random form with the ability to search at impressive speed for any characters stored. The diary is configured in 30-minute breaks up until the last minutes of the year 1999. Each diary entry may have an alarm set for up to 59 minutes before the due time, and of course the whole diary can be examined and listed. In its own right the calculator is very powerful with more than the usual functions as well as a 'What If?' facility.

Programming

The real power of the machine can be exploited by writing your own procedures using the resident OPL language. This procedure-based language is very powerful allowing very flexible access to data held in the machine. I have used it to define a more specific format for data storage rather than the random method offered in the basic database at switch-on. The only reason that I find this necessary is to allow a portability between the information stored on my CBM 128 and my PSION. Whilst the programming language is indeed very powerful, it does take some mastering as the manuals provided are somewhat inadequate in this area. Having largely come to grips with OPL I then discovered that KUMA publish a book 'Using and Programming the Psion Organiser' - if only I had known earlier !

Data Transfer

Having discovered how very powerful and useful the Psion is, I then set about the task of trying to get my CBM 128 to communicate with it. Everybody knows what fun interfacing can be, and there were some problems to overcome. If you own a PC the optional COMMS package and a suitable cable will do the work for you. It is not quite so simple with the 64/128 machines, but the task did not prove too difficult. I obtained the COMMS interface for the PSION, and an RS232 interface for my 128 from Meedmore Electronics. It was then a matter of configuring a cable to match the two, and over the phone I was able to agree a configuration with Meedmore who duly sent me a suitable cable. (For the record, I have always found Meedmore to be extremely helpful in every respect and I try them first for everything.)

All that remained was to match the RS232 parameters on the two machines. On the PSION this is done with ease via the COMMS menu, and the simplest way on my 128 was to set up the parameters on Superbase and Superscript in their respective RS232 drivers. This was easy to do, and the transfer of procedures and database files to PSION proved a simple matter. The benefit of using Superscript and Superbase in this way is that you don't run into problems of having to convert the beloved CBM codes to true ASCII values. Transfer in the other direction is less useful to me, and to achieve it I have to create an intermediate file on disk which is then loaded into Superbase or Superscipt. The whole process is easier on a PC, but then isn't everything ?

Conclusion

I find the PSION to be a superb piece of equipment which makes life easier when I don't have access to my 128, or when access is inconvenient. It's also useful for 'jotting' into the unconfigured database where I don't need to consider relating to my 128 database. I guess many of us could make use of this machine, but prospective purchasers should note that many stockists are still selling off the XP model in 16K form even though the manufacturers have released the 32K XP at the same price.

***

C128/64 TO AMIGA TRANSFER

by David Martin

[Ed's note — this article follows on from Brian's Blunderings last issue, and was originally twice as long as its present incarnation, the first half covering Brian Fowler's own findings on the subject. Brian was kind enough to examine and try out the techniques suggested here and commented that this is the method he currently uses. He also ported an article submitted to me on a 3 1/2 inch disk, which at the moment I cannot read. Please send any Newsletter material in this format to Iain Graves, the Co-Editor. Brian will still convert Amiga/128 files, and as he now has an IBM compatible, Amiga/IBM files, for members.]

128 control

For those without Easy/Superscript or wishing to transfer HEX files with error checking then a program such as TE-Terminal Emulator on disk 9 of the ICPUG C64 software library is needed. This includes 'Xmodem' a file transfer protocol with error checking. StarTerm also has 'Xmodem' facilities.

Load and run 'TE-Terminal Emulator' and press 'F4' to display the setup menu. Press 'B', and then press the Cursor Right key until '1200' is highlighted, press <RETURN> followed by 'T' and this will return you to Terminal mode. If the C128/C64 is connected to the Amiga and StarTerm has been set up as for use with Easy/SuperScript any characters pressed on the C128/C64 keyboard will appear on the Amiga screen and vice-versa. Before using 'Xmodem' in StarTerm, select the 'Xmodem Options' menu with the mouse, set the protocol to checksum, strip padding to on and timeouts to relaxed.

To select a file to send press 'F8' on the C128/C64, select 'S' and enter the name of the file, followed by <RETURN>. Now press 'S' or 'P' depending on whether the file is of 'SEQ' or 'PRG' type. If the file exists, the next option is the protocol menu: 'A' is the equivalent to using Easy/Superscript, and will send the file as if typed in at the keyboard and convert 'CBM ASCII' alphanumeric characters to 'True ASCII' for the Amiga to 'capture' into a file. Unfortunately some characters such as for colour are not stripped out and so can have unwanted affects on the C128/64 and Amiga.

The other two options use the 'Xmodem' protocol, which transfers data without displaying it on either screen. 'X' will transfer a file without altering its contents, 'T' will translate 'CBM ASCII' to 'True ASCII'. Which one do you choose? Well, if for example you have a machine code routine or a Viewdata frame you wish to transfer, select 'X'. If the file is text in 'CBM ASCII' format to be read on the Amiga, select 'T'. Having sorted out the C128/64 end of things how about the Amiga?

Amiga Control

StarTerm can receive text or binary files using 'Xmodem'. I tend to let the sending computer sort out any translation required and select binary, this will store the incoming file without alteration. Receiving with 'Xmodem text' will replace any characters above ASCII code 128 with a space character. After making your selection, enter the name the file is to be saved as and select 'OPEN' to begin the transfer of data. Confirmation of each block sent and received will be given on screen, and when all the data has been sent the file will be closed on the Amiga.

Xmodem works by splitting files into small packets, and calculates a checksum which is used to ensure each packet is received without error, if any error is detected the packet is requested again. There is a limitation as to how many times a packet is requested. The sending computer waits for acknowledgement from the receiving computer before starting to transfer. I found selecting the xmodem protocol on the C128/64 first, then 'open' on the Amiga made the transfer get off to a good start.

I hope my explanation has not been too complex — transfer is far easier to do than to describe!

⁂

BIG BLUE FOLLOW-UP

In my article 'The Big Blue Reader' (July/August issue) I mistakenly said that GWBASIC programs were stored on disk as ASCII files. I have been unable to re-test the package to see what it does with program files if left to its own devices. I hope to have a follow-up article ready for the November/December Newsletter to cover this and other related CBM to IBM conversion matters.

Henry Velleman

⁂

REVIEW --- MPS-803 DESCENDERS ROM

by Alan Hoskins

Many members will have taken advantage of the Commodore promotion at Christmas a couple of years ago and bought the re-packaged 1541 disk drive and MPS 803 dot matrix printer. It was great value - I only paid £175 for mine! The disk drive, apart from being a little slow and overheating (more about that in another article), has been great. The printout from the 803? Well, I didn't expect letter quality - but this was awful!

A few brave souls have tried writing software fixes for this and have been quite successful, except that none of them worked with programmes such as Easy Script (probably the most universal WP on the 64). The first attempt by a chap called Stephen Chance made use of the Kernal Jump Vector - unfortunately, Easy Script didn't! The second, more recent attempt was by an F. Randall and this one read ES files and printed them out. It couldn't, however, handle justification.

Recently an advertisement in CCI made me look again. A company called Avon Printer Technology of Bristol are offering a replacement ROM kit for the 803. ROMs for the 801 have been available for some time and are just plug in replacements. The 803 is different --- its ROM is PROM, if you get my meaning.

Needless to say, I now have the kit installed and though still not of letter quality (far from it!) at least the characters are readable, having descenders as well as a general improvement in shape. In addition to the standard character set there are Italic, Underline (see below), and Double Strike modes, all of which can be turned on and off in the usual manner with CHR$ codes. The paper-feed speed has also been increased and a few extra characters have been added: curly brackets, divide, right arrow and the copywrite logo.

The kit costs £30.00 complete and is a worthwhile investment, particularly if the 803 is your only printer. What do you get for your money? Two IC sockets, a 2764 programmed EPROM, a 74LS373 IC, a 2k2 resistor, a small switch (to switch the new ROM in/out) and a small piece of solder wick, together with 11 pages of very comprehensive instructions.

Fitting

Fitting the kit is not difficult but you must have some knowledge of soldering and a fine-tipped soldering iron. If you have no experience and no friends with this experience either (unlikely) then APT will do the job for you at an additional cost of £15.00. The instructions state that the job will take up to 2

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As I mentioned, the fitting instructions are extremely comprehensive with diagrams to allay any doubts about the text content. There was one minor discrepancy with my own printer (this is quite common with such equipment) - the earth connection between the PCB post and the metal base was two wires soldered to the underside of the PCB, these were removed at their furthest ends by taking out the fixing screws. Since sockets are provided, you do not have to touch the ICs at all until the soldering has been completed. Although it is mentioned in the instructions, it is worth repeating here that it is VERY important to discharge any static charge that may have built up in your body BEFORE handling either the PCB or the ICs --- this is simply achieved by touching some earthed metal before and occasionally during the operation.

One difficulty which might be encountered is finding the IC pins too spread out to fit into the socket. These must be bent inwards at the same time by pressing edgewise onto a firm surface and rocking the IC gently. It is important to check that none of the pins are crooked once the ICs have been inserted.

The ROM In Use

Although perhaps a little expensive (the developement costs have to be covered of course) the conversion certainly gives new life to an old 803. Can it be used with Easy Script? YES! It is quite simple to insert control commands in an ES document. First define the codes using F3/N=CHR$ where N is a number from 0 to 9 and CHR$ is the code (such as F3/0=21 would define double strike on). Then at the position in the text where you want the code to be sent to the printer, enter F1/N where N is the number of the previously defined code (to turn on DS for example you would include F1/0 in your text) - you don't type F1, F3 or / of course! Merely press the appropriate function key folowed by the number. The descenders are present all the time incidentally, provided the APT ROM is switched in.

The only problem I encountered in ES was that Underline only works with Shifted Space (otherwise the gap between words is left blank). This is easily overcome by defining a character (using F3/N=) as CHR$(160) and then replacing the normal spaces with the F1/N equivalent. Since a document will not contain much underlining this should not be too much of a problem.

[see Discount Corner for APT's address and prices - Ed.]

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NEWSLETTER CONTRIBUTIONS AND FORMAT

by Jim Kennedy

It must be stressed that all contributions to the Newsletter as well as any to the editors or writers of columns such Super* Corner must be in a form which can be read by VizaWrite or Superscript. This means ASCII (CBMASCII) text output from most other WP programs. It also means NO, repeat NO formatting of the text. Please don't use indentation, right alignment or justification, tabs, centering, etc. Using any of these options only results in weird symbols appearing in the text, extra spaces between words which must be removed individually, and a complete re-laying out of tables.

Do not use fancy directory listings on your disk. This includes 'lines between files' in the directory as well as non-alphabetic characters and/or spaces in the name of the program. While you may think it looks nice it makes life very difficult for the editors. They have to scan your disk and write down each and every character in each and every directory entry to help them enter the name of the file correctly. VizaWrite can load in most other WP ASCII files but not as a VizaWrite file. Each of these files must be loaded by name. Names such as

```
 -@@ Gizmo @@-
```

must not be used. Instead use short simple file names. A good example of a disk directory containing a letter and article submitted to the editors would be as follows:

```
 6   ltr      seq
 12  art      seq
```

Nothing else is needed, please! If extra instructions need be included for some unusual reason then place them in another SEQuential 'readme' file. Don't even bother using upper case letters in the file names. No WP package I know of can read in all other WP output simply be moving a highlight bar and pressing RETURN; names must be entered and case is significant in most WP packages. Also, VizaWrite sorts the directory alphabetically before listing so the extra lines added to make things look nice only add extra rubbish on the screen. Ignoring these simple rules, which may be summed up by KISS, Keep It Simple S*, may result in your letter or article not being read and acted upon.

Another thing to watch is the output of your WP to an ASCII file. Some ASCII output I've seen recently seems to have added extra spaces at times and at others concatenated pairs of words. Please check your files before posting your disk.

5 1/4 in floppy disks in 1541/1570/1571/4040 format are preferred. If you are sending in disks in 8050/8250/SFD1001 format then mark them clearly as such. 3 1/2 in Amiga disks should be sent directly to Iain Graves for porting across to 5 1/4 in format.

We do need articles from members, but don't complicate the editors' jobs any more than necessary. The need is for plain and simple text files which they will then edit, format and print. It is also a very good idea to send along hardcopy of your article especially if it has tables or you think it needs a special format. Unlike the disk file this hardcopy should be formatted as a guide to the editors in laying out your article in the final Newsletter form. Direct contact with the editors is strongly encouraged if you have any out-of-the-ordinary questions about format.

Generally, you will be safe if you follow the style of the Newsletter for your articles. That is make the first paragraph flush left and use two spaces for each succeeding new paragraph, one space between sentences, no blank line between paragraphs but one line between subjects. Use single quotes whenever possible and, if double quotes are required, then do a search and replace with two single quotes for each double quote. When 'typeset' on the LaserJet the two single quotes will be closed up like double ones. If this is not possible then let the editors know that fact in advance as all double quotes are automatically stripped out when files are processed for the Newsletter.

I should mention that there are apparently delays somewhere in the post office for some of the overseas mailings which have never been satisfactorily explained. Until now these have been confined to Australia where some members have received their Mar/Apr issue before the Jan/Feb one.

We generally try to put the Newsletter 'to bed' on the second weekend following the National Committee meeting which usually occurs on the first Tuesday of every other month. For example, as the September meeting took place on the 8th of September, the Newsletter should be put in final form on the 19th and 20th. It should then be sent to the printer around the 22nd or 23rd and printed either late that week or early the next. Packaging, labelling and posting should take place in the first week of October. But, being a voluntary organisation with weekends being the only convenient time to get group project done, this means that one hitch can delay everything by a week and two can cause even more delays. If your issue arrives OK (in a normal envelope) and the original one does not appear (in a clear polythene wrapper) then you may wish to make an inquiry through the postal system at your end of the line. We have had cases in the past, usually in corporations, where a Commodore owner in the company mail/distribution system was appropriating the Newsletter for himself! Newsletters sent to ICPUG members in Commodore apparently suffer this same fate often.

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COMAL CORNER

by Brian Grainger

First of all an apology on behalf of the Editors. The note on page 398 of the last Newsletter indicated that Viza was stripping all " from the copy, and they may not have picked up every occurence. It seems to me that last issue's COMAL CORNER was not well checked since every case of " that I could see was stripped with no amendments made. This helped to make the programs and routines extremely difficult to read. I hope you managed to amend them and get them working correctly. Now that I know of this deficiency in Visa I will try to avoid the problem in future articles. It is a shame really because replacing double quotes with two single quotes means you cannot guarantee that programs will line up as you type them in, line by line, as they appear in the Newsletter. I use this as a check that I have typed lines in correctly, particularly when entering text for screen displays. Perhaps Viza will address this problem so that their product might approach the usefulness of their rival Superscript!

Last time I mentioned I was going to explain the use of some of the programs off the latest released COMAL Today disks (Nos. 10 and 11). Firstly, a look at the packages on the 2.0 side of disk 10. Remember that to use these packages one must first:

LINK"<filename>"

To use a package command first access the library to which it belongs by:

USE <library'name>

PKG.BITMAP has one library, BITMAP, with two procedures

GET'BITMAP(<string$>) will save the graphics screen to <string$>.

PUT'BITMAP(<string$>) will restore the graphics screen with the contents of <string$>.

<string$> must be dimensioned to 8000 bytes.

PKG.CMON has one library, CMON, with one procedure and five functions.

MONITOR puts you in MLM mode with the following commands:

.A .D .F .H .L .M .R .S .T .X

They work as they do in Supermon.

LOCATE'REAL(<real>) returns the memory storage address of the real variable <real>.

LOCATE'INT(<int#>) returns the memory storage address of the integer variable <int#>.

LOCATE'STR(<string$>) returns the memory storage address of the string variable <string$>.

HEX$(<num>) returns a string containing the hexadecimal equivalent of <num>. The string consists of '$' followed by four hex digits.

BIN$(<num>) returns a string containing the binary equivalent of <num>. The string consists of '<space>%' followed by 16 binary digits.

PKG.CMON resides at $A800 and uses the RS232 buffer. Do not use the USER PORT with this package.

PKG.COMPACTOR has one library, COMPACTOR, with two procedures.

SAVE'COMPACT(<file'num>) will save a graphics screen bitmap in compressed form to the sequential file opened under file number <file'num>

LOAD'COMPACT(<file'num>) will set the graphics screen bitmap according to the data from the sequential file opened with file number <file'num>. The data is in compressed form and will be expanded before display.

Compression is carried out by coding when three or more consecutive bytes are the same. The code is 254 followed by the byte to repeat followed by the number of times to repeat. A single byte 254 will be encoded 254,254,1 to avoid confusion.

CRG2 is a program on the 2.0 Side of COMAL Today No.10 which uses this package to create and view compressed graphic pictures. The equivalent to the package for 0.14 can be found in the program crg14.compactor on the 0,14 side of the disk.

PKG.EPS'GRPH8009 has one library, PRINTER, with one procedure.

SCREENDUMP(<density>,<size>) will dump a graphics screen to an Epson printer with print density given by <density> and in double size if <size> is 1 or normal if <size> is 0.

This package is written for a USA 'Connection' interface so I am not sure of its relevance in the UK. The values for <density> are 0-6 as described in the Epson manuals. The package is located at $8009. PKG.EPS'GRPH9000 is identical but is located at $9000.

PKG.EXEQ has one library, EXEQ, with one procedure.

CALL(<string$>) enables the procedure defined by the variable <string$> to be executed. The procedure cannot have any parameters.

PKG.FINCHUTIL has one library, FINCHUTILITIES, with three procedures.

G10XDUMP(<int>) and RX80DUMP(<int>) perform a graphic screen dump to a Gemini-10X and Epson RX80 printer respectively. The type of dump depends on the value of <int> as given below:

1 1/4 page dump in single density mode
2 1/4 page dump in double density mode
4 full page dump in single density mode
8 full page dump in double density mode

OKIDUMP(<int>) performs a graphic screen dump to an Okidata 93A printer. The type of dump is given by the value of <int> as defined above where single density mode is defined as 60 dots per inch and double density mode as 72 dots per inch.

The package uses the transparent mode on the Cardco Interface which has a secondary address of 5. If you have a different secondary address then perform the following after linking the package:

```
sec'addr=<value>
poke $83C5,$60+sec'addr
poke $8424,$60+sec'addr
```

PKG.META has one library, META, with two procedures.

EVAL(<string$>) will perform the command given in <string$>, even if such a command is not normally allowed in program mode. One use is to be able to input an expression in an input statement which can then be evaluated to a value. an example of this can be found in the program META DEMO 1.

AGAIN will execute the last string executed with EVAL.

This is a very powerful package which can even be used to modify programs during execution. The only restrictions of use are that you cannot add new variable names or increase the program size. META is a ROMMED package which means it will NOT be saved with your programs when LINKed.

PKG.ROTATE is used by the FONT EDITOR program on the disk.

The major program on the 2.0 side of disk 10 is the font editor. This has a screen which indicates briefly what commands are available. Press I for two pages of brief information. Press any key to move between page 1 and 2 and page 2 and the editor.

Finally, on disk 10 are three programs, COPY, COMPARE and COPY/COMPARE. COPY allows you to copy files. If a single disk drive is used it will prompt to change disks as required and the file length must be no more than about 28K. If the file being copied is a PRG type then this must be specified in the target file name. Eg. MENU.BACKUP,PRG.

COMPARE will compare and report differences between two specified files. COPY/COMPARE contains both utilities.

The bulk of Disk 11 side 0.14 is taken up with a graphics editor, written by Colin Thompson of the US COMAL Users Group. It is a very versatile set of programs. To use it you should create a work disk made by copying the following files to a blank formatted disk:

HI
FILE.1.J through to FILE.16.J
DIRECTORY
COMPACT PIX
the appropriate DUMP file for your printer
Any .HRG or .CRG files you wish to use.

You may wish to create separate disks for bitmap and compacted pictures as follows:

```
Insert 1st disk
  PASS"n0:bitmap pictures 1,mn"
  LIST 10 " directory" (note the leading space)
Insert 2nd disk
  PASS"n:compact pix 1,bv"
  LIST 10 " compact pix"(lading space again)
```

To use the system CHAIN"HI" from COMAL.

On the 2.0 side of COMAL Today disk 11 are a number of useful programs. GREYMAT allows you to fool a friend in thinking the computer is psychic. The idea is to run the program. The result appears to be that the computer is in immediate mode awaiting a command and in fact most commands will work. By some means or other your friend tells you a playing card he has in mind. You say that the computer will read his thoughts and to set it in motion you type RUN. In fact you type Rxy where x is the rank of the card and y the suit. For example if the 5 of clubs is the card you type R5C. This will echo to the screen as RUN and after a short pause the computer reports that the card chosen is the 5 of clubs! Silly but effective. When carrying out this trick make sure the stooge cannot see what keys you are pressing.

PKG.TEXT has one library, TEXT, with four procedures and one function. It is used to maintain a 16K text buffer. This is useful to programmers who require fast access to text without using a disk drive. The package is written by Dick Klingens of the Dutch COMAL Users Group.

READLN(REF x$) fetches a string from the buffer

WRITELN(REF x$) writes a string to the buffer. When the buffer is full an appropriate message is printed.

RESET puts the reading pointer at the beginning of the buffer.

REWRITE puts the reading and writing pointers to the beginning of the buffer and clears the buffer.

EOT returns TRUE when the reading pointer is in the same position as the writing pointer (i.e. at the End Of the Text buffer).

PKG.DOBBELSKAERM has one library, DOBBELSKAERM, with two commands.

GEM copies a hires screen into cache memory

SKIFT swaps the current hires screen with that stored in cache memory.

The odd names are because the program is written in Danish.

All of the above information has been gleaned from COMAL Today Issues 10 and 11 from the US COMAL Users Group. I trust the information helps to make Disks 10 and 11 more useful. Now that you can see how useful packages are you might wish to consider buying a COMAL cartridge. I am happy to say I now have some English prices for all UniComal products including COMAL cartridges. Here is the full list:

Commodore 64 COMAL cartridge	£58
Commodore 128 COMAL cartridge	£72
MSDOS COMAL Vers 2.10	£200

Postage & packing etc. for any of the above products is £10.

MSDOS COMAL PLUS Vers 2.10	£450

Postage and packing is £12.

COMAL PLUS is the standard MSDOS COMAL PLUS a compatible COMAL Runtime System PLUS an RS232 Serial Communications package.

All prices exclude VAT which will no doubt be charged by customs. Orders should be accompanied by a cheque drawn from a UK bank account rather than your own account if you want immediate delivery. Otherwise UniComal will wait for clearance of the cheque. Orders should be sent to:

UniComal A/S
Tvaermarksvej 19
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DENMARK
Tel: +45 1 67 35 11

I am extremely grateful to John Kelly who informed me of a couple of bugs in the fast loading COMAL 0.14 disk v. 1.2 (30/1/87). During the process of adding the additional facilities a few bytes had got changed and you will find that the Turtle command, BACK, and the sprite command, SPRITEBACK, are not recognised. These are not used too often which helps to explain why nobody has mentioned it. Anyway, I have contacted those responsible for producing the fast loading version and have now got an upgrade disk (v.1.3). If anyone who has 1.2 would like the latest disk send disk and return postage and ask for v.1.3 COMAL 0.14 starter disk.

Peter Crowder has been busy converting some COMAL 0.14 programs to work with cassette. The full list available is:

A FEW UTILITIES	Various
3D	Demo of 3D graphics
1520'LIST.MOD	List to 1520 plotter
GRAPHICS'DEMO	
SPRTE'TRTLE'DEMO	
MUSIC'DEMO	
PRINTER'DEMO	
FORMATTER.MOD	
LINE'FIL'VWR.MOD	view a file a line at a time
PAGE'FIL'VWR.MOD	view a file a page at a time
UTILITIES.L	various
RECURSIONS.L	various
JIFFY.L	procedures to set and read the jiffy clock
JOYSTICK.L	procedures to read the joystick from COMAL
PADDLE.L	procedure to read paddles from COMAL
LOGICAL'OPS.L	add some bitwise operators
CONTROLPRINTER.L	procedures to use an MPS802/1526 printer
STRUCTURE'PRG'1	Teach yourself structured programming suite
STRUCTURE'PRG'2	Teach yourself structured programming suite
STRUCTURE'PRG'3	Teach yourself structured programming suite
STRUCTURE'PRG'4	Teach yourself structured programming suite
STRUCTURE'PRG'5	Teach yourself structured programming suite
STRUCTURE'PRG'6	Teach yourself structured programming suite
HI-LO GAME	Teach yourself structured programming suite
THE MEMORY GAME	
ROMAN'NUMERALS	Teach yourself how to convert from MCMLXXXVII to 1987
KEPLERS'ORBS.L	Astronomy program
MOON PHASES.L	Astronomy program
MOON1520 HIRES.L	Plot the above to the 1520 plotter
HIRES 1520.L	Plot a graphic screen to the 1520 plotter
FIXTURE	Create a fixture list
KEYWORDS.L	Find out what keywords are available in COMAL

If you want any of the above cassette program library rules apply and they can be obtained from Peter Crowder whose address can be found under PC E-O librarian.

That's about it for this time. I'm off to Ireland in a few days for the next COMAL Standards meeting, where I will present my proposals for COMAL Graphics. Hopefully I will have a report next time.

***

NETWORK NEWS

by Brian Grainger (Prestel mailbox 438727925)

Well, as mentioned last issue I have parted company with Compunet for the time being. So far I have had no problems as a result, and I would have expected a bill by now if problems were to occur. I'll keep my fingers crossed. I did however send them two letters, one to the old address and one to the new, just to make sure they didn't get lost in the move. They refrained from responding to my comment that competitive networks do not change charges in mid-period. I also said that I thought their attitude was rather cavalier in changing the agreement between themselves and the user just as it suited them.

One thing I forgot to mention last time was that when Compunet sent out their letter to announce the new charges they included a sheet from the ICC (Independent Compunet Club). Personally I find the ICC the most non-independent 'Independent' club I know. They have represented Compunet at a number of shows and have yet to say anything critical of them. Now they get their mail distributed by Compunet. Personal opinions apart I wish to comment on some 'facts' from their sheet. I quote:-

'Compunet's connection charges have always been amongst the least expensive around - particularly when you consider the features available. Check for yourself, and keep an ear to the ground for changes in the way

Prestel/Micronet bill for connection. Other networks may cost less, but none can compete with features we take for granted.'

Granted, prior to the price hike Micronet was dearer than Compunet (£16.50 as opposed to £12 plus Istel charges). It isn't any longer though. ICC themselves recommend the Gold subscriber option and fixed connect charge which totals £18. In any event, because of the speed of Prestel and information available I would say the cost per page viewed is MUCH lower on Prestel. It is easy to hint that Micronet might be changing their charging structure. If they do, ICC can say 'I told you so'. If they don't, ICC can declare that they didn't say it was definite. In any event the changed charging structure relates to Telecom Gold and NOT Prestel/Micronet.

Finally I quote one other item:- 'Two of the most basic ones (features taken for granted) are the preparation of Editor frames (try doing the same for a Prestel mailbox!) and subscribers can UPLoaD their own work onto the database when they like'. I should think that 99% of all 64 users on Micronet use Mustang software. If so they can prepare mailboxes off-line. I am sure a nice Prestel user will teach the ICC how!

Users can upload pages to the Gallery of Prestel/Micronet, download software from Solely 64 and More, and have their own software uploaded by SSF. In addition there is a much wider spread of information on Prestel. I feel that Compunet does provide some useful facilities. After all, the WHOLE of the ICPUG 64 software library is on there, something we cannot do on Prestel. Nevertheless I object when any organisation makes claims which bend the truth a little!

Many of you on Prestel will have seen that Micronet users can now access Telecom Gold via Interlink without paying standing charges for Gold. I have taken this option although I have not started using it yet. I am a bit put off by the increase in Gold charges that happened after I joined up! When I eventually have a look around I will report my findings.

Viewers of the ICPUG pages on Prestel will probably be concerned that updates have been rather infrequent. To some extent this is due to the nature of Jim Clavier's job, which eats in to available editing time on Prestel. I have started to edit pages again using RubyView on the Amiga, although I too am not a frequent editor since I have other things to do. Duncan Hamon will be helping out just as soon as he has been on the Editor's course. The timing for that is outside of ICPUG's control as it is run by the ACC. If in the meantime any queries and replies are not forthcoming from Jim Clavier then I will be happy to accept mailboxes and do my best.

***

LANGUAGE LISTINGS

by Brian Grainger

Finally thought of a catchy name for this occasional piece! Following my request for information last time Brian Foster provided me with the initial listing of languages available for Commodore machines by quoting me the list from Calco Software.

LANGUAGE	MACHINE	PRICE(£)	WHERE FROM	INFO. DATE
Oxford Pascal	64	34.95(d) 19.95(c)	(a)	Aug. 87
Oxford Pascal	128	42.95	(a)	Aug. 87
Abacus COBOL	64	32.95	(a)	Aug. 87
Abacus COBOL	128	32.95	(a)	Aug. 87
Super C	64	42.95	(a)	Aug. 87
Super C	128	42.95	(a)	Aug. 87
PetSpeed BASIC Compiler	64	19.95	(a)	Aug. 87
PetSpeed BASIC Compiler	128	42.95	(a)	Aug. 87
Zoom Pascal	64	25 approx	(b)	83
COMAL 0.14	64	Free	Me	Sep. 87
COMAL 2.01	64	68.00	(c)	Jul. 87
COMAL 2.01	128	82.00	(c)	Jul. 87
COMAL 2.10	PC	210.00	(c)	Jul. 87
Absoft AC/FORTRAN	Amiga	296.15	(d)	Jun. 87
TDI Modula 2	Amiga	101.10	(c)	Jun. 87
K-Seka 68000 Assembler	Amiga	81.10	(d)	Jun. 87
Lattice C	Amiga	131.10	(d)	Jun. 87
Metacomco LISP	Amiga	151.10	(d)	Jun. 87
Metacomco ISO-Pascal	Amiga	91.09	(d)	Jun. 87
TrueBASIC	Amiga	172.50	(d)	Jun. 87

Prices in the above list include VAT (when from UK) and postage. They do not include VAT when outside of UK. Remember that some suppliers give discount to ICPUG members. Contact John Bickerstaff first! Products quoted are the basic products. Enhancements, e.g. runtime versions exist in some cases.

Key to the Suppliers

(a) Calco Software, Lakeside House, Kingston Hill, Surrey. KT2 7QT
Tel: 01-546-7256
(b) Abacus Software, P.O. Box 7211, Grand Rapids, MI 49510, USA
(Dynamite Software, London were agents in 83)
(c) UniComal A/S, Tvaermarksvej 19, DK-2860 Soeborg. Denmark
Tel: +45 1 67 35 11
(d) Precision Software, 6 Park Terrace, Worcester Park, Surrey. KT4 7JZ
Tel: 01-330-7166

A word about ZOOM Pascal is perhaps in order. I quote from Brian Foster: 'This is not a full implementation. Some of Pascal's advanced features are omitted. The editor is absolutely abysmal. So bad in fact that I wrote a replacement for it, in COMAL (What else! - BG). The reason I occasionally use ZOOM is that it compiles down to 6510 machine code so programs run very fast. An Eratosthenes sieve program run with the times given below:

CBM BASIC	27 secs
COMAL 2.01	16 secs
Oxford Pascal	12 secs
Zoom Pascal	4 secs

Let's be hearing from some more of you to get that languages list expanded.

***

BILL'S BULLETINS

ICPUG's legal advisor, Alistair Kelman, was able to pass on these observations of the new 'Cost-Reduced' CBM 128D computer to our Chairman, before this Newsletter went to print. We hope to have a more detailed report in the next issue. Also called the '128 Desktop', the new 128D seems to adhere to Commodore's usual policy of shooting themselves in the lower regions. The plastic case has been exchanged for a metal surround with no carrying handle and no clips on the bottom to attach the keyboard (ergo 'Desktop'). Apparently a new disk drive has altered the whole nature of the DOS, so presumably we are now going to have a new 'generation' of versions, one V5 for one 128D and a different one for the other. Still, at least they've got rid of the fan. All will be revealed in the next exciting installment ...

BRIAN'S BLUNDERINGS

by Brian Fowler

As some of you will know, I have been searching for the answer to the following question almost from the day I first ran BASIC on the Amiga: how can you get 80 column text from BASIC ? Well, I've found the answer, and in doing so, discovered quite a bit about accessing the operating system routines from BASIC. First, a recommendation: if you want to program seriously in BASIC on the Amiga, buy Compute's 'Advanced Amiga BASIC' - it's well worth the fifteen pounds or so, being written in the clear style for which Compute publications are famous. The book is heavy reading in places, but perseverance brings its own rewards. The following short program, which demonstrates 80 column text, is based on routines found in the book.

It is possible, again using routines from the book, to use any of the fonts in your FONTS directory from BASIC. I tried this using a 7 point font, and although I could get the 80 columns I wanted, the font was rather difficult to read! What I needed was a way of stretching the screen, and a way of allowing the BASIC output window to extend beyond its inbuilt maximum width.

The way to stretch the screen is found on Fish Disk #54, and is called 'MoreRows'. By carefully following the directions in the text files which accompany the program, one is able to arrange things so that your system will boot up with a wider screen than usual.

Once you have done this, you will be able to run the program below, and obtain the magical 80 columns. Before running the program make sure that you have the required .bmap files in the same directory, or add a CHDIR to your bmap directory at the start of the program. A word of explanation about the listing - as some of the lines are quite long, I added '<CR>' at the end of each logical line, so even if the lines are split for the purposes of the Newsletter, you should still be able to type in the program correctly. Don't, of course, type in '<CR>' --- just hit the RETURN key at the end of each line.

```
DEFLNG a-Z <CR>
LIBRARY intuition.library <CR>
LIBRARY graphics.library <CR>
WINDOW 1,Window Limits,(0,0)-(500,180),31 <CR>
MinWidth=200 <CR>
MinHeight=200 <CR>
MaxWidth=680 <CR>
```

```
  MaxHeight=230 <CR>
   <CR>
  CALL WindowLimits(WINDOW(7),MinWidth,MinHeight,MaxWidth,MaxHeight)
<CR>
   <CR>
  PRINT <CR>
  PRINT  please size window to right as far as possible <CR>
  PRINT <CR>
  LINE INPUT then press RETURN to see 80 columns of text ;a$ <CR>
  PRINT <CR>
   <CR>
  WIDTH 80 <CR>
  FOR i = 1 TO 8 <CR>
    FOR j=1 TO 10 <CR>
      PRINT RIGHT$(STR$(i),1); <CR>
    NEXT <CR>
  NEXT <CR>
  FOR i = 1 TO 8 <CR>
    PRINT SPACE$(9)+!; <CR>
  NEXT <CR>
  FOR i = 10 TO 80 STEP 10 <CR>
    PRINT  USING ##########;i; <CR>
  NEXT <CR>
  PRINT <CR>
  PRINT <CR>
  LINE INPUT Now press RETURN to see FAST printing to screen....;a$ <CR>
  CLS <CR>
  msg1$=STRING$(80,*) <CR>
  msg2$=STRING$(80,!) <CR>
  L1=LEN(msg1$) <CR>
  L2=LEN(msg2$) <CR>
  FOR k = 1 TO 20 <CR>
    CLS <CR>
    FOR i = 1 TO 10 <CR>
      CALL Text&(WINDOW(8),SADD(msg1$),L1) <CR>
      PRINT <CR>
    NEXT <CR>
    CLS <CR>
    msg2$=STRING$(80,!) <CR>
    FOR i = 1 TO 10 <CR>
```

```
      CALL Text&(WINDOW(8),SADD(msg2$),L2) <CR>
      PRINT <CR>
    NEXT <CR>
  NEXT <CR>
  LIBRARY CLOSE <CR>
   <CR>
  END <CR>
```

⁂

PLUS 4 LIBRARY

by Richard Hunt

Thanks to the efforts of Phil Brunt, and others, the Plus 4 library now consists of 4 disks, namely Utilities, Games, Other and Financial. The latter is a straight copy of a disk from someone called D P Griffin and was originally for the PET. The programs are 'wholesome' BASIC however and appear to run OK on the Plus 4.

That's the good news; the bad news is that I am now subscribing fully to the rules of the library, ie. 2 disks or 4 tape programs only per request, and also catalogue requests on disk/tape only — no more hardcopy will be available. The reasons are a) my time and b) my paper — both cost (me). As always, please ensure that return postage and packaging are supplied. I will stick stamps on, but I will not check that there is sufficient postage. It would be helpful if all requests accompanied by disks could state whether they are formatted or not. You have no idea of the aggravation at finding a disk unformatted after I have spent 10 minutes reading in half a disk.

Lastly, I propose, following an excellent idea from member Mike Kirk in Geneva, to create a Forth disk for the library. This will take a little thought because of the different ways Forth implementations for various CBM machines access disk. Probably there will be two formats: PRoGram files readable by my own Plus4orth and SEQuential files for others.

Plus4orth is now finished bar production of its manual. There is also a version for the C-64. If you are prepared to wait for the manual, which at the time of writing may be a few weeks away, I am prepared to take orders from now on: please state Plus 4 or C-64 and disk or tape. I shall provide the rest. Price including P&P for the manual - £9.90. Please send crossed cheques/POs in favour of R G Hunt. My address is inside the back cover of the magazine as Plus 4 librarian.

128 LIBRARY

by Chris Wright

Most of you will notice that the 128 library now has a new organiser and librarian, and the current librarians have been re-allocated This article was destined for the last issue of the Newsletter but due to circumstances it was unable to be fitted in. Apologies for this.

Thanks must go to the retiring Organiser, Tony Harrison-Smith, and Paul Smith, one of the librarians. Both have done stirling service to ICPUG. Bill Gardner has now taken over Paul Smith's slot as well as the overseas copying for M-Z. He runs the newly started Bulletin Board (see last issue page 402 and the Catalogue disk). Dave Tew has filled Bill's old slot and we thank him for doing so. Damien remains on D-J and I am still copying for A-C and the overseas A-L.

Before informing you of the new releases I would like to touch on an old chestnut: packaging. We all have our own ideas as to what is safe and adequate to send disks through the post with. However, it is no joke to the librarians who receive them. Some are just right: firm packing, easy to open and re-pack. Others have already fallen apart, or are in the process of doing so. This damages your disks and creates work the librarian does not want. We then have the other extreme of too much packing, or so tight or stapled that it takes ages to get at the disks. The librarians are all volunteers, performing this service to the membership in their spare time. Please respect this and be more sensible with the packing.

New Disks

There are 17 new disks in the library. I am afraid that 3 of these are for 1571 owners only as they are good programs and it would have been a shame to leave them out. Apologies to 1541/1570 owners but there are plenty for you to pick from now.

128 Mode

In 128 mode there is Steve Green's LAZY GREENIUS assembler and disassembler with RAM disk and IBM mode. Steve has used this to write commercial software and we thank him for donating it to the library. 1571 owners one disk; 1541/1570 owners two disks to count as one request. Request U1 Disks S1 is now version 3.0 and S3 is version 2.0

CP/M Mode

In CP/M mode the following are new disks:

CU5	STOIC stands for Stack Oriented Interactive Compiler-editor, assembler, debugger, loader etc. Also FORTH79. This comes as two disks and is for 1571 owners only. Manuals on disk.
CU6	FATCAT is for 1571 drives only and those with a B drive which can be 1571/1570/1541 and is a disk file catalogue program. Manual on disk.
CU7	EXPRESS is probably an easier word processor than Wordstar. Manual on disk.
CU8	DAZZLESTAR, SWEEP, RESOURCE dissassemblers, housekeeping packages etc.. 1571 only and manuals on disk.
CU9	SCRIVNER Word Processor with the facility to have spreadsheet facilities within the W.P.! Manual is on disk with squeezed files.
CU10	Help files for languages and other major commercial software. Vol 1
CU11	WAH housekeeping and PCFILE database Manual on disk.
CU12	Vol 2 of the help files.
CU13	NULU disk and library tidy. Manual on disk.
CU14	DATABASE; NOTEPAD, FILTERS, Squeeze/unsqueeze; Peek and Poke programs.
CR2	Second recreation disk.
CL5	LISP, an artificial intelligence language. Manual on disk.
CL6	EAASIC language and database management system. Manuals on disk.
CL7	DBQ is a language orientated relational dtabase. Manual on disk for 1571 only.
CL8	ALGOLM is a mathematical language. Manual on disk.

Please note that in order to get files onto a single sided disk, they have been squeezed using NSWP on CU2. 1541/1570 owners please copy the files across to a seperate disk and unsqueeze them there. They are recognised by the DQC mark. Whilst touching on NSWP we strongly recommend that you use this housekeeping package. It is very powerful and we wish to push it hard to establish uniformity. The above disks will keep you all busy for a while as the nights close in. In order to save on space in the Newsletter I will not be writing an article like this again. After each Newsletter please request the catalogue disk C1 to keep abreast of updates and new releases. C1 requests will not count towards the 2 disk maximum.

Finally, don't let Commodore or the computer press fool you about the 128. It is still selling over double the number of Amigas and has some of the best business software available on any micro of its class. It needs software houses to support it more and not abandon it.

A Powerful Wordprocessor
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Fontmaster 128

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From the author of **Fontmaster II** comes **Fontmaster 128**, an enhanced version for the Commodore 128. This powerful word processor with its many different print styles (fonts), turns your dot matrix printer into a more effectual tool. Term papers, newsletters, and foreign languages are just a few of its many applications.

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★ On-screen Font preview
★ 80 column only
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★ Insert graphics within text or superimpose text over them and turn this package into a Desk Top Publisher. Clip-Art disk with 110 images £5. ICPUG members may obtain a 10% discount.

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We also stock the **BIG BLUE READER** and **GEOS 128**. Send a large S.A.E. for more details of our 128 software. Discount for ICPUG.

NEW: The Commodore 1581 3½ inch—fast data-transfer rate (8000 cps with the 128; 900 cps with the 64)—full CBM compatibility with the 128/64 serial drive—6502 processor running at 2MHz for Program, Sequential, Relative and C/PM filing—MFM format. Must be a bargain at £199.95 (P&P £3). We can supply FONTMASTER 128 in 3½ inch format. This is a special ICPUG price valid for 1 month only.

DISCOUNT CORNER

Please refer to pages 82/85 in the January/February issue for general information, pages 203/204 in the March/April issue, pages 298/299 in the May/June issue and pages 403/405 in the July/August issue for more discount details.

Telephone calls

Please make your calls to me after 8.30 pm and before midnight. If I should be out please leave your name, 'phone & membership number and brief details of your requirements on the answerphone — I will call you back later.

Resignation

Due to personal circumstances David Murray has had to withdraw from ICPUG activities so please send all your written enquiries to me, see inside front cover. Thank you David for all your help in the past.

Products

There have been no more announcements from Commodore since the previous issue on new products. The A2286 Bridge card was scheduled for September lets hope it will be on schedule. The hard disk and controller card might not see these shores before 1988.

AVON PRINTER TECHNOLOGY are marketing an MPS803 PRINTKIT IV kit to improve your MPS803 printer. This kit, which can be switched out if required, provides true descenders, an ITALIC character set, an emphasised BOLD option and a single pass underlining facility. RRP £30, special members price £27 direct when quoting your current membership number. Your contact is member John Barcroft at Swindon House, 4 Howard Road, Southville, Bristol BS3 1QH (0272-667167).

The Amiga Centre — Scotland (was Arithmos) — is at 4 Hart Street Lane, Edinburgh, EH1 3RN — telephone 031-557 4242 and your contact is Martin Lowe. This dealer has now available a program called SCULPT 3D and a demonstration disk can be obtained. Please contact Martin Lowe for a copy. Bitstream Publishing of 26-28 Osborne Road, Southsea, Hants, PO5 3LT have reduced their price for their Amiga INFOMAT to £4.95 to members. Send your cheques directly to them. Overseas orders £1 extra please.

Database Software. Mini Office II is available at £16.95 on disk (RRP £19.95) or

£13.95 on cassette (RRP £16.95) to members when ordered through me. Send your cheque, made out to Database Software Limited and endorsed on the rear with your membership number and your address, with your written order and an 18P stamp to me. The program will be despatched to you directly from the software house. It is confirmed that Database Software can supply a modified program to enable their software to run on the Enhancer. The program does work when loaded on the Excellerator+. For those of you using a Brain Boxes interface connecting a 4000 series disk drive it is NOT possible to run Mini Office II. The reason is that the program uses up all available RAM and the Brain Boxes interface needs 4k itself --- conflict = crash.

Digital Solutions Inc products for the C64 and C128, Pocket Writer, Planner and Filer have for some time been available through Haba Marketing Limited at discounts to members. Since Haba have now ceased to distribute this line in the UK their generous discounts are no longer available to members.

Fontmaster 128 is available from Bytes and Pieces --- see their advertisement in this issue --- at £49.95. members may obtain a discount of 10% on direct application to Chris Wright. The program comes bundled with a dictionary disk. GEOS programs are no longer available from First Analytical Ltd., who have appointed Once Bytten as the UK distributor. At this time the distributors are not in a position to offer members any discounts. For your information it is thought that GEOS for the C128 will soon be available in the UK although the price has not yet been announced. Upgrades may be available for purchasers of 1.2 or 1.3 versions.

LAN Computer Systems Ltd., of 1063 High Road, Chadwell Heath, Romford, Essex, RM6 4AV (01-599 0961) who specialising in the Amiga A500 range have two contacts, Mike Brown and Tony Judge, ask for either person and state your current membership number before making your enquiry. They have various specials offers on at this time including the STAR NL10 printer.

Timeworks (Commodore) products discount vouchers have not yet been received so if you have requested these from me please be patient for a little while. It may be that by the time you read this article I will have received stocks and the list of dealers through whom you may exchange these vouchers.

Trilogic have moved to Unit 1, 253 New Works Road, Low Moor, Bradford, BD12 0QP phone 0274-691115. They have agreed to allow members 5% product discount when quoting their current membership number for direct sales.

Viza Software Limited have now released their Desktop program for the Amiga range. The RRP price is £99.95 and members price is £65.00. Other product prices are Vizawrite with speller on disk for the C64 (RRP £59.95 - ICPUG price c39.00) or the same programs in cartridge form (RRP £79.95 - ICPUG price £52.00). Vizastar for the C64 on cartridge (XL4 costs RRP £79.95 - ICPUG price £52.00 = XL8 costs RRP £99.95 - ICPUG price £65.00). Vizawrite Classic for the C128 (RRP £99.95 - ICPUG price £65.00) and Vizastar for the C128 (RRP £129.95 - ICPUG price £85.00). Vizawrite for the PC has an RRP of £74.95 - ICPUG price £49.00. The ordering procedure is to make your cheque out in favour of Viza Software Limited sending it to me with your written order and an 18P stamp.

Y2 Computing Ltd., have again revised their Ruby Comm --- Ruby View - which should cost £10 to exisiting owners to update. Call Rod Eva for special ICPUG member prices on these and any Y2 products. The number is Watford (0923 - 50161).

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Late Ads

C128 Software for sale: Superbase 128 (including 'Superbase The Book' £35. Vizawrite Classic 128 word processor £55. Super C language compiler (also includes 64 version) £25. BASIC 128 compiler (First Software includes 64 version) £29. All are disks (original), boxed and complete with manuals. Plus, 12 DS/DD coloured disks (Disking) suitable for C128, in plastic box £9. Phone (0969) 23462 after 6.30 pm Thursday to Monday (N. Yorks)

C128/1541; datasette; 1520 plotter; MPS802 printer; Seikosha GP100vc printer; Compunet modem; Handic Mon-64 cart; Superscript & Base 64/128; joysticks; mouse; many utilities; over 100 games; many books. £650. Will split. M. Loewenthal, Witch Hazel, Western Avenue, Thames Ditton, Surrey KT7 0NB, tel (01) 398 5634

FM expander (disk) £45. 5-octave keyboard £40. Editor/composer software (disk) £15. Sound sampler (disk) £40. Infocom adventures (Zork Trilogy, Suspended, Deadline) £3 each or all 5 for £12. Tel Penketh 8775 after 6pm (Cheshire)

CBM 4032 £45. 8032 £110. 4040 drive inc. cable £130. IEEE to Centronics Interface free with above. Matt Zepler, Southampton (0703) 554488

READERS WRITE . . .

Judging by the general content of this issue's column, we were tempted to rename it 'HELP SCREENS', or something of a similar nature. All letters to the Editors are welcome, but it is worth pointing out that there is a large body of knowledgeable members within ICPUG willing to impart their skills and experience to those less enlightened. Mike Todd's exhaustive Help Register in the March/April 1987 edition of the Newsletter lists but a few of these people.

HAM HELP

Steve Studdart, 28 Halkyn View, Connah's Quay, Deeside, Clywd CH5 4NB wants to hear [pun? Ed.] from Amateur Radio Enthusiasts:

As a fairly new member of ICPUG may I first say how much I have enjoyed the Newsletter and look forward to the next one. A letter in the May/June issue that caught my eye. It was from a Mr Ted Cachart of Derby and refered to a group known as AMRAC. I would like to contact them as I am interested in computers and radio. What is their address, and are they worth joining? I am also looking for public domain software for use by radio amateurs, short wave listeners, CB radio enthusiasts and so on. I am the secretary of a group known as the Delyn Radio Club who meet in Mold, North Wales.

Information seems to be thin on the ground around here so if any of your readers can send me anything, such as circuit diagrams, titles of good books or software itself (either disk or tape for the C64, or listings for the C64 or any other computer) I would be most grateful. The sort of software I am looking for includes RTTY, Satellite Communication, Morse Tutors, Computerised Log Books and so on.

On a different subject I would like to contact members in my area with Commodore 64s with the view to starting a local users group or simply to exchange information. I would really like to meet someone conversant with machine code who can get me started. Is there a good machine code tutorial about, and can anyone help with books on the language Forth?

Keep up the good work.

● Thankyou for the kind comment Steve. Well, can anybody out there help him? Mike Todd's ICPUG Help Register lists quite a number of Amateur Radio enthusiasts. Please see Steve's advert in the WANTED section for more details.

PRINTER PROBLEMS

Jill Dick, Oldacre, Horderns Park Road, Chapel-En-Le-Frith, Derbyshire SK12 6SY has a tale of woe concerning her reluctant printer and Vizawrite:

I have a Brother HR15 printer connected via a Stack Centronics parallel interface to my 128 with two 1541 disk drives and yet cannot use Vizawrite Classic for my daily work.

When printing using Vizawrite my printer misses the occasional letter or space and sometimes a RETURN, creating havoc. Set it to underlining and all goes haywire. Proportional printing is a laugh, with everything squashed up together, quite useless. All this is infuriating and means I cannot print with confidence, but have to save my copy, convert it to 64 mode, load up again and print it (with the same printer) in Vizawrite 64 which I have happily used for years with no trouble.

Not being knowledgeable about how to make a Brother HR15 printer profile I have repeatedly turned to Vizawrite for help and they have, over some four months, supplied me with no less than five different profiles on disk and a replacement interface plus cable, each with the assurance that 'it is perfect this time.' Alas, it never is, and the problems remain.I have also written to Brother in Guide Bridge, near Manchester, but have as yet had no reply.

Please can someone help me, or do I have to forget Classic and revert to my faultless old 40 column Vizawrite 64? Are there any other members out there with the same set-up as mine who know the solution?

I will be so grateful for any assistance. Long live ICPUG!

MORE PRINTER PROBLEMS

B.Gough, 10 Drovers Way, Hatfield, Herts. writes with a plea for help with his Seikosha printer:

Could anybody please help me with my Seikosha GP-100A Mk2 printer? I use it with my Commodore 64 and it works fine with most of the programs I have, but it will not do any form of screen dump. Mini Office II is the only commercial program I have that will successfully carry out a graphics dump. Any help that can be given to me would be gratefully received.

ORGANISING SUPERBASE 128

Dennis Thompson from 2 Savery Close, West Earlham, Norwich NR5 8NJ is having problems trying get be relational to Superbase 128:

I need a program to help me organise my database. While I can program the system for the printer and disk commands, I'm finding that my programming for inter-action between files is somewhat lacking. Thus my plea for help. Is there anybody in the Norwich area that can help me organise my system ? The database consists of one file containing some 18 fields, within these fields only one relates to the 'occupation' of the key field. What I require is a master file that sorts out all the 'occupations' into its own file, and manages these files directly from the master. As a new record is placed into the master it is automatically inserted into the secondary file, or as a record is deleted then the secondary record is also erased.

As this database consists of records that are changing with time and movement, I'm finding myself lost in the application of the structure of programming my needs, and the fact that my attempts don't work does not help! Should anybody out there find themselves in a position to help me it would aid in retaining my sanity and keep my wife from becoming a computer widow.

● Dennis also requested all matter relating to Superbase from past editorials. Much as we'd like to oblige, we simply don't have the time or manpower. To those members who have similar needs, we suggest they consult Mike Todd's comprehensive Newsletter Index which is published in the first issue of each year, and then contact Jack Cohen, the Membership Secretary, for the back issues. Although it is now called Super* corner, a regular column for Superbase was started back in 1984, Vol.6 Number 5, by Hugh de Glanville.

CONVERTING TO SUPERSCRIPT

Mrs. P.Tahil, 63a West Hill, Putney, London SW15 2UL badly needs help with the conversion of plain basic sequential files into Superscript:

Can anybody help me how to read a plain basic sequential file into Superscript? Easyscript will accept such files, as it claims, but I have to then transfer the file from Easyscript to Superscript, but this is a very tedious way of doing things. What is particularly annoying is the title of the offending file always appears in Superscript when F2 is pressed, but any attempt to read it into my 64's memory results in a 'FILE NOT FOUND'.

As an invalid I must spend much time lying down. I purchased a Microwriter electronic notepad with RS232 interface that can be used in that position. I then hook up my 64 and use the program supplied to read in and save the contents of the Microwriter's memory to my 1541. I must then load my old Easyscript, read the file from disk into memory, save it, load Superscript, read the file into memory, and save again. I am sure you appreciate my problems, and any suggestions would be most gratefully received.

MOANS AND GROANS

Frank Murray is a loquacious friend of mine (with friends like these ...) who pops round on a Saturday afternoon, whilst I am contemplating my choice of beverages the previous evening, to impart his latest woes. It looks as though Frank, who lives at 8, Robbins Ridge, Amesbury, Salisbury, Wilts. SP4 7RF, has at last written for the Newsletter, so hopefully he'll leave me alone for a while:

After spending a large part of Saturday afternoon berating one the new Editor about a number of varied gripes he finally retaliated (not at any great speed, probably due to the hangover) with the dreaded words "Well, submit an article for the magazine." So putting fingers to keyboard I decided to get a few things off my chest and hopefully to stir up a bit of action. So here they are, a varied collection of moans, groans and just occassionally the odd bit of praise.

Compunet

I know that there have been several articles written about Compunet and I hope that perhaps someone will heed them, for I like many others have just terminated my membership. I live in the Salisbury area and up until the changeover my nearest access node was Andover, a distance of ten miles, which meant that my telephone charges were reasonable. How then did the changes affect me? My nearest access node is now Winchester, a distance of thirty miles. This makes calls long distance and on top of this I must pay access charges. The old Compunet was slow but I could afford it, the new Compunet (according to rumour) has not improved and as I am priced out of the market it is with regret that I say goodbye, as I used to enjoy a ramble through the pages especially those of our CUG.

Prestel (Micronet 800)

I may be giving up Compunet but Micronet still lives. It's a local call, it has faster paging, it appears to download faster and I can afford it. Perhaps those of you in the know could take steps to increase our involvement and expand the Commodore section. For on my last look at 'Solely 64 & More' the cupboard was looking extremely bare. Would it perhaps be possible to open up our own CUG on Micronet? (Over to the management).

Commodore 128

Like many others I bought a CBM 128. This letter has been processed on it, but why do I get the feeling that the world has forgotten us? I realise that the Amiga is a marvelous machine but I am not buying one, at least not in the near future. I still have my trusty CBM 64. It's heavily in use and I still don't know as much about it as I feel I ought. As for the 128, I should master it by about 1990. So to all you GURUS of the older machines impart your skills to us in the form of hints tips routines ect, before it's lost for all time.

Back Up Copies

I'm afraid that the last line of Jim's Jottings in the July/August magazine raised the blood to boiling point. I'm sorry Jim, but I do not regard the spending of £19.95 for a spare Superscipt 64 to be a good deal. If you have spent hard earned cash to buy software then as a registered user you should be entitled to purchase a back-up at a nominal fee and in my books £20 is not a nominal fee. I accept that ICPUG does not support software piracy but I also support the policy that if it can't be backed-up don't buy it. It is a general concept of software policy in industry that you never use your master but generate working copies from it. Why should we be different? As for Easyscript --- if there is anyone out there who is desperate I have two unused copies with manuals that you are welcome to.

CBM Repairs

Through a loose lead in the user port I managed to destroy most of the 5 Volt power circuitry of my 128 and so started the long business of phoning round to get it repaired. In general the price quoted was pretty constant at £55 but repair time varied from three weeks (Postronix) to ten days (Veeran) and most small magazine advertised firms were unobtainable on the phone so immediately discounted. In a vain hope I visited a small local shop POS PLUS of Amesbury. They are a registered Commodore dealer with their own repair staff and carried out my repair for a cost of £21.00 with a four day turn around. So if you are in the South of England and need repairs they are well worth a call. Speaking to the staff the only major problems are getting Commodore to supply parts and at reasonable prices but then isn't that a case of the old old story.

And Finally

Well it hasn't all been gloom and doom so I would like to finish with a plea: I find our magazine good value but please let's keep it as a Commodore products magazine, not the Amiga corner. To that end, as I said before, if you have any hints and tips or useful small routines share them with the rest of us, especially anything for the CBM 128. Remember: what to you might be glaringly obvious may to me and many others be the blinding flash of light that solves a major problem.

GENEALOGY . . . AGAIN

Jonathan Barber, a Superbase user and contributor to Super* Corner this month, puts his own views forward on starting a genealogy SIG:

I have been meaning to write to you for some time, but it was the references to genealogy by Stephen Farrer, R Tester and Denys Coppard in the last few issues of the Newsletter which have finally prompted me to do so.

I have been an amateur family historian for a lot longer than I have been a computer enthusiast, and indeed it was my genealogical interests that gave me the excuse and the rationale to buy my Commodore 64, followed at intervals (finance permitting) by the 1541 and Star NL-10 printer.

The Birmingham and Midland society for genealogy and heraldry (of which I am a member) has a flourishing computer group. This group meets monthly and all makes of computer are welcomed, the most popular being the BBC. Four or five of us have Commodores, and it is generally accepted that Superbase is the best program on the Commodore 64 for genealogical data, beating not only other databases but also all purpose-written genealogy programs on the Commodore that we have yet come across.

For some of my genealogical records I have been using Superbase, having tried and given up on Infodisk. I am compiling a computer index of Barber events in the Prestbury area of Cheshire from which my Barber ancestors originally came. So far I have 400+ marriages on disk and I am now in the process of entering a further approximately 700 baptism, burial and miscellaneous entries. My wife is interested in a one-name study of the surname Hustwit, with its 26 other variants from Hurstwait to Hutswith. We have put some 700 of the general register office birth entries into Superbase.

In answer to your anonymous correspondent about Superbase (P. 217 of the Newsletter) I would take a lot of convincing before I used any other database for genealogical purposes. The amount of space which it receives in the Newsletter is a measure of its excellence and all-round usefulness not of its (supposedly indescribable) difficulty of use. Any program worth using for genealogical purposes must needs be powerful, and any powerful program is going to take a bit of effort to use to its full effect. There is a program on ICPUG disk no.8 called 'family roots', but this is just not sufficiently powerful to use for serious family history purposes, though as a source of harmless amusement no doubt it has its uses. In any case BASIC is just not fast enough for the amount of searching and sorting which is needed for serious genealogical applications.

I was a subscriber to the late lamented Commogen Newsletter. It would be in my view a good thing if Commodore genealogists could find some kind of forum through ICPUG, to share knowledge and ideas on such topics as the use of databases, word processors and spreadsheets for genealogical records, and the best means of obtaining printed family trees.

Perhaps I shall not be the only one to respond belatedly to the initiatives which have been made, or if I am I hope that this contribution may inspire others to make their voice heard for a genealogy group.

- There's so much interest being shown in this at the moment that if someone doesn't start up a SIG soon, this column will become Genealogy Corner.

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Late For Sale/Wanted

SOFTWARE SALE: Amiga De-luxe Paint £50. CBM 128 Microswift Spreadsheet £15. Glentop Drawing Board £25. CBM 64 Superbase £35. Superscript £35. G.A.C. £12. Esayscript £10. Microswift Spreadsheet £10. Micro Magpie Database £20. Calc Result Spreadsheet £25. David Davies, 51 The Henrys, Thatcham, Berks. RG13 3LS, tel 0635 65271

WANTED: SFD 1001 or 8250 disk drive and Brainbox interface. Terry Hart, 17 Burns Gardens, Lincoln LN2 4LJ, tel 0522 29643

FOR SALE & WANTED

For Sale

C64/1541/C2N/1520 printer/1701 Colour Monitor/8050 Drive; Brain Boxes IEEE cartridge interface; Superscript; Superbase; Paperclip 64; Ultrabasic; Easyscript; Easyspell; Simons Basic; 1541 Express; FreezeFrame MK 2; Admon Speech Synthesizer; Music Composer. £500. VIC 20/16K Ram/1520 Printer-Plotter/C2N; paddles; joystick; lightpen; Voice Synthesizer; Super Expander Graphics; plus games on cartridge & tape; books. £50. Susan Hudson, 9 St Davids Road, Southsea, Hants P05 1QH, tel 0705 815037

PET 4032 £60. 4032P Printer £80. 8050 D.D £200 (all include manuals and leads). CBM MCS 801 colour printer; printer control program; manual and leads £200 ONO. CBM 64 Datasette; manuals; software; leads £130 ONO. Plus 4 as new includes software, leads and manuals £95 ONO. IEEE Interpod £30. MPS 801 £80. C128D, disks, leads £350 ONO. DPS 1101 daisywheel printer, ex. condition £195. Wafadrive as new £15. Neos mouse (cassette) £25. Will p/ex any of the above for an 8250 drive complete, Mono RGBI Monitor, 128 software. G Foden, 35 Woodhall Drive, Banbury, Oxon. OX16 9TY

C128; 2*1571 disk drives; 1901 monitor; CBM 40/80 green screen monitor; Star SG10C d/matrix printer; datasette; CBM modem; wide range of bus/educ/games software. £995. James Raynor, 42 Roundhill Way, Loughborough, Leicestershire. LE11 0WB, tel 0509 262914.

SUPERBASE 64 £25. Superscript 64 £25 (both only 8 months old). Flight Simulator II £35. Star NL10 Commodore serial interface £25. Pogramming The 64 (RC West) £8. Superbase, The Book £7. Call Ian on (0232) 617482 (Belfast)

BROTHER M1109 PRINTER unused £145. Stack RS232 for Plus 4 £20. Script Plus cartridge for Plus 4 £25. S Howarth, 6 Farm Close, Heaton Chapel, Stockport, tel 061 432 6779 (evenings)

POCKET WRITER V1 & POCKET FILER V1 for the CBM 64/128 £25 each or £40 for both. D Thornton, 46 Balmerino Rd, Dundee, Scotland. DD4 8RR, tel 0382 505437

1541 disk drive £95. 1701 Monitor £95. C128 s/w Superscript & Superbase £35 each. Kikstart (game) £5. C64 s/w Vizastar 8k cartridge £45. Vizawrite cartridge £40. Michael Grizzard, 5 Cross Rd, Tadworth, Surrey. KT20 5SP, tel 073 781 3644

Wanted

VIZA Star and Write for C128. Michael Grizzard (see above).

BOOKS for the 64: Machine Code Games Routines by Paul Roper, Sunshine ISBN 0 946408 47 5 list price £6.95. Machine Code Graphics & Sound by Mark England & David Lawrence, Sunshine ISBN 0 946408 28 9 list price £6.95. W A Cheek, 372 Caerleon Rd, Newport, Gwent. NP9 7LT

PUBLIC DOMAIN software of use to radio enthusiasts (amateurs, short wave listeners, CBer's etc.) such as Morse Tutors, RTTY, Satellite, Computerised Log Books, etc. Also wanted circuit diagrams for interfaces, and the titles of good books on the subject of computers and radio. Software on disk or tape if C64, or as listings for any other computer. Any tapes or disks will be returned. ICPUG members using C64s in the Deeside/Chester/Merseyside area to form local users group or simply to exchange information. Please contact:- Secretary Delyn Radio Club, Steve Studdart, 28, Halkyn View, Connah's Quay, Deeside, Clwyd, CH5 4NB. or PO Box 150, Mold, Clwyd, CH7 1YL, or telephone Deeside 819618

ICPUG Software Libraries

Organiser: Joe Griffin, Clovelly, Lynwick St, Rudgwick, Horsham, W Sussex RH12 3DJ

Please remember that the libraries are operated on an entirely voluntary basis and, unlike many of the American User Groups, ICPUG DOES NOT CHARGE A COPYING FEE.

The Libraries contain PUBLIC DOMAIN programs from a wide range of sources, including our own members and other user groups. WE DO NOT SUPPORT SOFTWARE PIRACY.

Members may obtain ALL the library material. In order to retain a measure of control over the work-load imposed on the Librarians, however, we do restrict the amount of material that may be obtained on any one request.

Disk users may obtain up to two disk copies at a time (Plus 4 three, Amiga five).
Tape users may obtain up to four programs, from any one disk.
(Please use a C-60 or VC-90 tape ---a C-15 or C-30 may be too short.)

To obtain copies of catalogue or library disks, please send:

A statement of what you want
Your membership number
Disks (stating FORMAT --- type of drive --- required) or Tape
 We will NOT use a disk as a 'flippy' as it can damage the disk drive
Pre-addressed reusable packaging suitable for return
 There have been occasions when disks have arrived bent in half!
 Please ensure that packing is adequate
Return postage --- SEND STAMPS
 Overseas members should send International Reply Coupons
 (allow at least one-and-a-half IRCs per disk sent)

PET --- Joe Griffin (see above)

VIC --- Joe Griffin (see above)

COMAL --- Brian Grainger, 73 Minehead Way, Stevenage, Herts SG1 2HZ

1520 Plotter --- WGC Austin, School of Geography, Faculty of Humanities,
Newcastle Polytechnic, Lipman Building, Sandyford Rd,
Newcastle upon Tyne NE1 8ST

1520 (Tape) --- John Bentley, 38 Conway Rd, Taplow, Maidenhead, Berks SL6 0LD

PC Organiser: Tim Arnot, Flat 3, 26/28 Osborne Rd, Southsea, Hants PO5 3LT
Please always send your requests to the librarian listed below who deals with the CATALGOUE CATEGORY of material you want. Catalogue from Peter Crowder --- see below.

A--D Henry Velleman, 52 Ventnor Drive, Totteridge, London N20 8BS
E--O Peter Crowder, 27 Crawford Drive, Liverpool L15 8AE
P--Z David Harrow, 28 Phoenix Drive, Wateringbury, Maidstone, Kent ME18 5DR

Software Libraries (cont.)

Plus 4 (& C-16) --- Richard Hunt, 45 Cumberland Rd, Bromley, Kent BR2 0PL

C-64 Organiser: Andrew Hartley, 83 Thornton Cresc, Wendover, Aylesbury HP22 6DQ
Please send your requests to the librarian listed below who deals with the first letter of your surname

A--B David Miller, 38 Exeter Gardens, Ilford, Essex IG1 3LB
C--F R Burns, 48 Grasmere Rd, Royton, Oldham, Lancs OL2 6SR
G--K Geoff Crowther, 60 Fleckney Rd, Kibworth Beauchamp, Leics LE8 0HE
L--O Ray Medford, 4a South Grove, Brooklands, Sale, Cheshire M33 3AU
P--S Nigel Corry, 4 Horsted Way, Rochester. Kent ME1 2XY
T--Z Peter Crowder --- see PC Library, E--O, opposite

Germany (inc. BAOR) Lt AR Perkins, 11 Trenchard Rd, RAF Digby, Sleaford, Lincs

Overseas (other) & 8050/8250 --- Joe Griffin --- see opposite

128 --- Organiser and software collator: Chris Wright (see below)
Please send requests to the librarian listed below who deals with the first letter of your surname

A--C Chris Wright, 37 Cecil Str, Lytham, Lancs FY8 5NN (also Z80 cartridge requests and 8050/8250 copies)
D--J Damien McEnroe, 11 Pentridge Cl, Eastfield Chase, Cramlington,
K--R Bill Gardner, 156 Henwood Rd, Compton, Wolverhampton WV6 8PA
S--Z Dave Tew, 4 Acombe Cresc, Hambrook Pk, Charlton Kings, Cheltenham, Glos GL52 6YH

Overseas A--L Chris Wright; M--Z Bill Gardner (see above)
128 BULLETIN BOARD on 0902--745337 (24h) see p402

Amiga --- Organisers: Archie Clark, 20 Middle Mead, Fareham, Hants, PO14 3EG
& Peter Miles, The Queen's Armes Hotel, Charmouth, Dorset DT& 6QF.

COPYING REQUESTS TO:
ICPUG disks David Annal, 142 Windermere Rd, Norbury, London SW16 5HE
Non-ICPUG Amiga John Bickerstaff --- see front cover --- up to 10 disks
(not to Mike Todd, who is no longer copying disks)